Vincent Mary School of Science and Technology

Department of Information Technology

IT 4416

Computer Simulation and Risk Analysis

Submitted to

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1. Introduction

Most of senior students are finding the job before their graduation, senior students will apply their job description to many industries and hope that they will be selected. Many industries will select some of them by just looking their face and their information without knowing their real knowledge or their real performance. As a result, they will not work with fully efficiency during their internship because some of them may not even know what the work is about and also this will cut some of the good students' opportunity who have high performance and match to the requirement because they are not selected. Furthermore, not only the part of selection, but also the training period some of industries just get some students to sit without working so that is really bad if that student is not really know how to work. As we know that internship is one of the most effective ways to develop skills and experiences to get oneself ready before actual work, e.g., analysis and problem solving skills. Accordingly, these experiences cannot be found in the class so, the selected students who have an opportunity to work should perform their best performance to show that they can do. However, the problem is that there is no appropriate system in most industries to select there good student to work in the right position. For example, many industries received students for having a train regarding Human Resources' decision by just looking the profile or just their emotion at that time, the following problem of doing this may concern the qualification of students may not match to the requirement, which necessary in specific department and the quality of the work may low and the employer may evaluate students with the low score on their profile that they have to use this in the future and make their future gloomy.

Interesting programs

PTT Internship Program

PTT Public Company Limited or simply PTT is a largest Thai oil and gas company. Formerly known as the Petroleum Authority of Thailand and they owns an extensive submarine gas pipelines in the Gulf of Thailand. There is an internship program every year in PTT for senior student in order to gain experience about these things. To know how to work with oil and gas equipment without dangerous before fieldwork. On the other hand, their internship system may not good enough because of several problems. For instance, their website or system provided just a few information for reader and their processes just only submit some documents and fill in the register form and just wait students name to be announced without facing students face and knowing their real performance. Even though students whose name have been announced and have to interview and have a test one by one before work but some of students with real knowledge who really interesting in this field may cut off from the first round.

SCG Internship Program

SCG extends an invitation to students from all departments studying at any university to join us as a trainee as part of our SCG Excellent Internship Program and SCG Co-Operative Education Program, our internship programs during school terms. Throughout your time with us, you will have an opportunity to learn new things, develop new skills, and gain hands-on experience, all of which will equip you for your future careers. Trainees are encouraged to think, be creative, learn about innovation and good governance, so that they will become a driving force behind the development of our country in the years to come.

In this program the students can get relationship from the activity in team building activity. The student will be get new friends from this activity. Moreover, Student will be learning a training on basic knowledge of business for participants to become familiar with the business world prior to the start of the SCG Excellent Internship Program. Also, Internship at companies under the SCG group to gain knowledge and hands-on experience. Lastly, CSR activities can help the student have a good responsibility to the society.

The benefit that SCG internship program will give to student. First, SCG will give a daily allowance of 500 baht. Second, accommodation and transportation costs will be provided (in case your assignments are outside of Bangkok and for participants from outside of Bangkok who have their internship program at the headquarters in Bangkok). Third, medical care at the infirmary at the headquarters. Four, group insurance policy

(personal coverage of 400,000 baht), Moreover, SCG will provided fitness and sports centers. Lastly, discount for TOEIC test fee (worth 700 baht) Certificate of internship
The SCG Excellent Internship Program differs from other internship programs for the following reasons:
1. The program encourages learning through gaining hands-on experience and educates the participants on corporate governance, with an aim of creating not only skilled but also valuable people for the work force.
2. During the program, participants are assigned a mentor who will provide one-on-one advice and coaching.
3. Participants are encouraged to think creatively and win an Innovative Suggestion Award by submitting ideas.
4. Participants have an opportunity to learn how to manage their own business by collaborating with peers from other areas of expertise in the Business Game activity for a chance to win a Business Game Award.
5. Participants who win the Innovative Suggestion Award and the Business Game Award have an opportunity to join a field trip to visit an SCG entity abroad to learn about international business operations.

CP internship program

Charoen Pokphand Foods Public Company Limited (CPF) is one of the biggest organization that is the leading agro-industrial and food conglomerate in the Asia Pacific region. The Company operates in both the livestock (swine, broilers, layers, and ducks) and aquaculture (shrimp and fish) businesses. The vertically integrated businesses incorporate the manufacturing of animal feed, animal breeding and animal farming; meat processing, the manufacturing of semi-cooked meat and fully-cooked meat; food products and ready meal products, as well as the meat and food retailer and restaurant businesses.

2. Current method (Manual Process)

1. PTT Internship System

Details
PTT Public Company Limited or PTT has encouraged the undergraduate students by providing an opportunity for non-experience students in its business units in order to accumulate skills and experience.
Requirements
The students should be an undergraduate students who intend to train at PTT, must register in the subject of field experience or study in the stipulated course or program which is stated precisely the credits, workweek and must have an effect on the graduation. The consideration of apprenticeship will not be more than two students per faculty per university.
Process

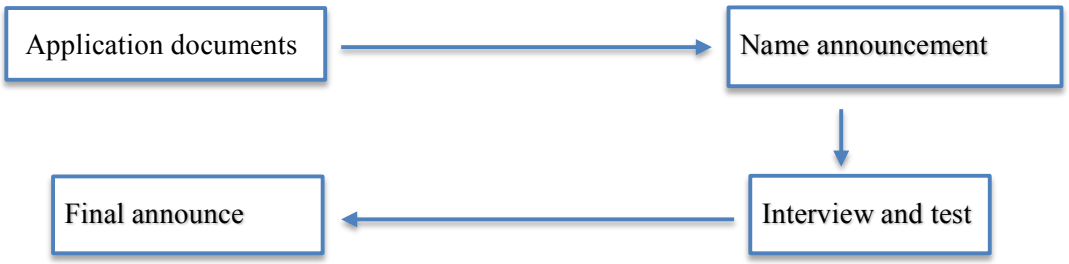


Fig. 1: shows the process of current method system

1. Application documents
This including:
One letter of recommendation (To Vice President Human Resource Service),
One 1” x 1” photograph,
One copy of updated university transcript.

In order to selected the right one, HR may have to look at these documents before choosing students because they have to analyze whose skills and performance is the most match with the requirement that they provided

2. Name announced

After applied documents and there is a name announcement, students whose name were announced have to go for an interview and test on the date that provided by PTT

3. Interview and test

In order to have an effective interview process, the interview chairman will inform the candidates about the company's recruitment process for a preparation. With prepared questions, the chairman processes to ask questions for candidates to answer. As the chairman carries out the questions, other members can give additional questions to find out more information and consolidate data. Through this activity, the members can evaluate general factors such as circumstance, character, life style, dynamic and sharp, the striving in the course of work and the capacity to work under high pressure conditions. And also doing the test with general questions that company provided to test some basic knowledge of the candidates and HR will announce the date and time for final round.

4. Final announce

This announcement will announce students who have passed the interview and test or HR is satisfied with the score and performance. The students will be ready to begin their internship in this process.

Lacks in the process

There are many processes that are lacked in PTT internship system. First, they do not have documents screening process which will help them to select the right student to work for them with high and real performance. Second, no specific test, PTT just provided an English test for the applicants to test how good their English but haven't provided the specific test for the specific field which are about gas and oil so that who just good in English will pass anyway meanwhile the applicants who really know and want to be a trainee but poor in English may loss an opportunity. Finally, lack of information, the information on PTT's website just a little, so that it will make applicants unclear about the information needed and may be misunderstanding as well.

2. SCG Company

Application to join the program starts in September throughout November every year. Requirements are during at the time of the application, the candidate must be a 3rd year student studying at any university in Thailand and the candidate must have an accumulated GPA of 3.00 or above up until the 4th or 5th semester. Lastly, the candidate is interested in joining an internship program in engineering, accounting, marketing or human resources management

There are divided into 2 sections. The first semester: Application: February 1 – April 10 and Interviews: May 10-20, Announcement of successful candidates: May 31, Internship program: August - December
The second semester: Application: August 10 – October 10, Interviews: October 10-31, Announcement of successful candidates: October 31, Internship program: January 16 - May 12

The timeline of the program, Application is accepted from September until the middle of November - An announcement of shortlisted candidates is made in the middle of November - The written test is taken at the end of November - An announcement of shortlisted candidates for the interview round is made in the middle of December - Interviews are conducted in the middle of January - An announcement of successful candidates for the program is announced in February. The internship program takes place during the summer break from the beginning of June until the beginning of August every year, for approximately 2.5 months.

There are divided program into 3 programs

1. SCG excellent internship program Requirement
   -Third-year students from any department/ faculty studying at any university in Thailand who are interested in joining our SCG Excellent Internship Program
   -A minimum GPA of 3.00
2. SCG Co-operative education program Requirement
   -Applicants must be 3rd or 4th year students, studying in any field at any university in Thailand, and are interested in joining SCG Co-Operative Education Program
   -The minimum GPA is 2.7
3. SCG International Internship

The program welcomes students studying any of the following four areas, namely engineering (all majors), accounting, marketing, and human resources management. Students majoring in other areas which may be relevant such as economics (relevant to marketing) or political science (relevant to HR management) are also encouraged to apply.

Before work with SCG excellent internship program. The candidate will take written test. The written test will be multiple choice questions. Test duration is 3 hours. The test is divided into two parts: 1. the competency test is in two areas as follows: - Engineering (for all engineering sectors) - Applied knowledge on management (for accounting, marketing, management, economics, political science, etc.) 2. The English language proficiency test is held at the end of October on the same day at test centers in Bangkok and regional test centers

Process

Steps to apply for SCG internship program

You can visit the Web site www.scg.co.th/jobs where the following announcements will be made:

1. An announcement of shortlisted candidates who are invited to take the written test will be posted around the end of December of every year.
2. An announcement of shortlisted candidates who are invited to the interviews will be posted around the end of January of every year.
3. An announcement of successful candidates who are invited to participate in the internship program will be posted around the end of February of every year.

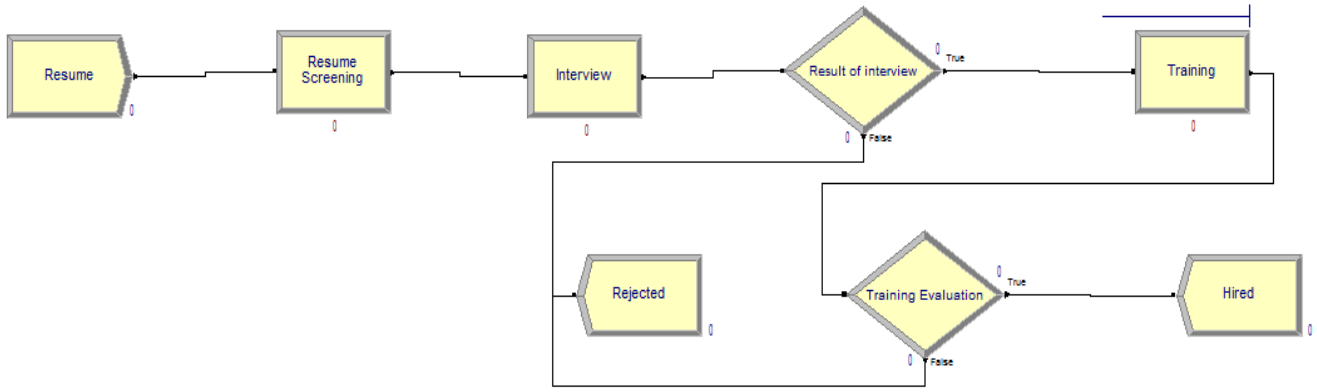


Fig. 2: shows the process of applying for the internship project

Lack of process of the SCG Excellent Internship Program.

The SCG Excellent Internship Programs is only accepting student who get GPA more than 3.00. The students who get GPA below 3.00 will be no chance to register in this program. There are many student wanted to register this program but they are not smart enough to get GPA 3.00.

3. CP Company

Feed Business

The Company is a leader in feed production and distribution in Thailand with its main products including swine feed, chicken feed, duck feed, shrimp feed and fish feed, in form of concentrated feed and completed feed in either powder or pellet. The feed is formulated according to nutrition requirement by different types and age groups of animals

Farm Business

The Company is a major animal farming operator in Thailand with swine, broilers, layers, ducks, shrimps and fish as the main products. The Company's animal breeding and husbandry farms are situated in several provinces throughout Thailand. Products under the farm business can be divided into 2 main categories as follows:

1. Animal breeds
2. Live Animals, Products from Live Animals, and Basic Processed Meat

Retail and Food Outlets

To provide consumers with more convenient choices of access to its products, the Company has invested to expand its distribution channel for Company's products. The main type of products includes ready-to-serve meals, ready-to-eat chilled and frozen products under CP brand, and meat products either cutlets or cooked, chilled or frozen.

Internship Project of CPF

The fundamental principle of CPF is to support internship. A CPF internships aim to develop, train, and prepare students onto professional areas by "learning from the real experience" from professionals who have significant expertise at the organization.

There are 3 main objectives for the internship project as follows:

1. Step into learning – to sense the real experience being a part of a large organization.
2. Combine learning – to learn the culture of CPF group which is corporate culture, learn to work as a whole.
3. Prepare before – to prepare interned student before entering actual work.

CPF offers 2 project types as shown below:

1. Internship Program
2. Co-operative Education

In order to apply a form for the project, the form is needed to be submitted on http://apply.cpf.jobs, the process of applying for the project from sending the form to accept the student to the project as shown in Figure3.

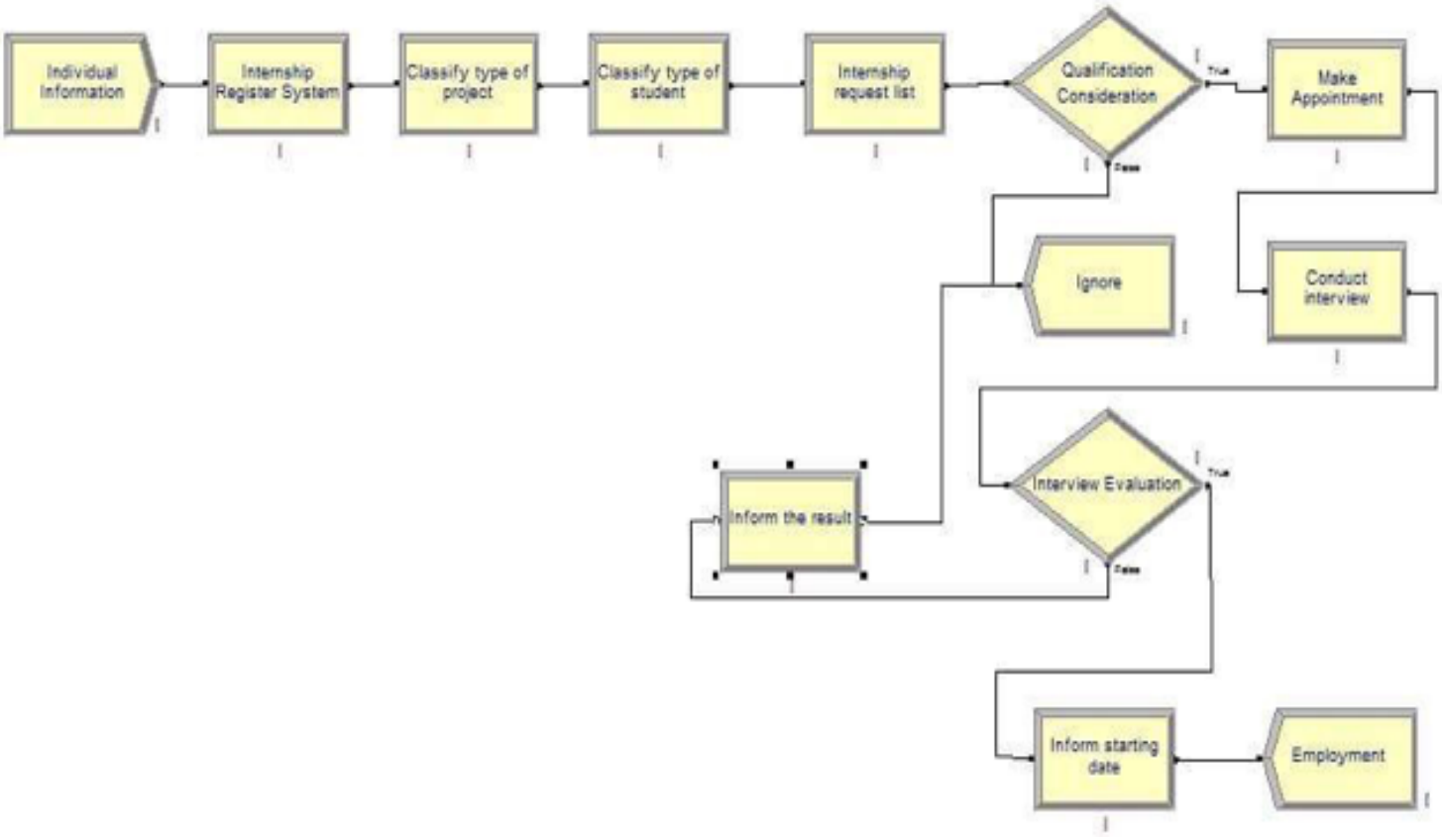


Fig. 3: shows the process of applying for the internship project

The only qualification for applying in the program is being 3rd or 4th year university student. In order to apply your information for an internship program, students needs to register username and password on http://apply.cpf.jobs by filling a form provided on the website, including picture of current transcript, national ID card as well as 1.0" courtesy photo taken within 6 months. After finish a registration process, the student will be classified which type that they applied for, whether Internship program, or Co-operative education. Next, the organization will classify student according to the area that students studied in university. The consideration of applying for Internship and Co-operative Education at CPF is based on related & requirement of departments only.
The following are the areas that CPF group offers for student to do an internship project:

1. Science student – consist of Veterinary, Fisheries, Food Science and Technology, Animal Science, Occupational Health and Safety.
2. Engineer student – consist of Mechanical, Electrical power, Industrial.
3. Business Administration student – consist of Accounting, Human Resources, General Management, Marketing, Economics, Agricultural Administration.

Then, student will be considered by HR of the organization. HR personnel will be a person who consider student who is qualified .And making a call for making an appointment the date of interview with the potential participants, or just ignore them if they are not qualified. After conducting interview, the interview committee which comes from different department will discuss about the answer of that particular interviewee to evaluate the result. For those who pass the interview will be informed about the result as well as the starting working date .And for those who fail for the interview, the result will be informed also.

Steps to apply to improve the system

1. The organization may ask interested student to write an essay, and let that essay be the criteria of qualification consideration since there is no specific qualification for applying to the project
2. The qualification of applying to the project should be more specific, and detailed
3. The interview result should be officially announced on the website to be clear.

Lack process – control volume of interested student
For the current system that is used by CPF group, there is lack of volume controlled of interested students, since the qualification to be considered during these processes is accept the project requests from only 3rd and 4th year university student. It means that the number of participant cannot be estimated, it might be huge number of interested student applied to the project. The organization need to spend more time on interviewing many participants while their organization might need only few personnel. It would be better if the organization can limit the number of interested student apply to the project

3. Proposed model

Proposed System 1

1. Received paper

As we would like to apply work for trainee in the company. We need to write permit to apply to the company. Paper must contain information of trainee. However, if the student come to work for working experience that the university send them. It must including their purpose in the paper why they want to work.

2. Human Resource decided

After received paper, human resource will select who they are interested. Human resource department will have their standard requirement to choose who are meet their requirement. This step will take some time to choose.

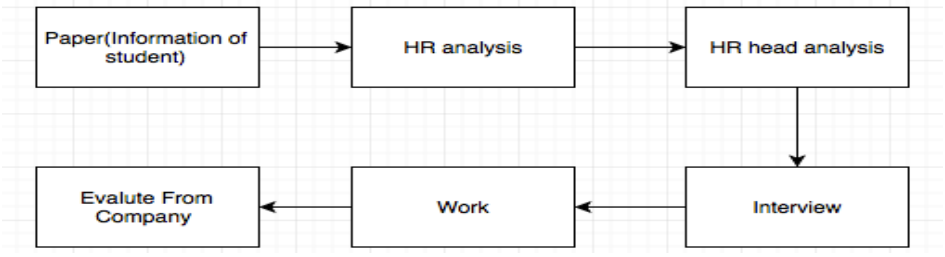


Fig. 4: Shows the process of proposed system 1

3. Head Human Resource accepted

This step will depend on head of human resource department who they want to choose to work with them. Selected people will come from human resource department to be choices.

4. Interview

Selected person will called to interview at the company. Interviewee must prepared themselves to be ready to questions that interviewer will be asked. The interviewer will asks you questions about your career, personality and life and you answer honestly while trying to impress them. Job interviews can be really stressful. However, if you prepare properly for your job interview and it really is easy to do then you can get rid of the nerves and show your interviewer why they must hire you. And so our interview advice is designed to get you job interview ready

There are 3 type of interview

One-to-one interview is the most common type, you are interviewed by just one person (usually the boss!) and it's a simple question and answer session.

Panel interview is a bit scarier. This is where you're interviewed by more than one person at a time, expect two or more interviewers to be in the room with you.

Competency interview is the most advanced interview type. You'll be tested on different situations e.g. 'tell me about a time when you showed good teamwork'.

5. Work

These steps is important steps for trainee. The propose of work is to improve skills and knowledge.

6. Evaluate from supervisor

This will collect feedback from supervisor, clients and other workers regarding performance.

When they evaluate work, it is important to breakdown job description into specific tasks and determine the standard to which each of tasks should be performed. These should assess trainee performance of these tasks in terms of feedback . Trainee need to seek help from supervisor for training or education session to improve their skills and knowledge. It is necessary to identify own limitations, weakness. Evaluation, help to determine whether the skills currently trainees have are sufficient or whether they need to be improved.

Proposed System 2

An another system that can also handle the process of recruiting trainees of companies. The system is called "Human Resource Information System" or "HRIS". HRIS is a form of HR software that combines various kind of systems and processes of HR together to make sure that the management of a business's employees and data is easy. These systems could deal with everything from getting resume to performance evaluation, covering the whole business. Human Resources Software is used by businesses to combine a number of necessary HR functions, such as storing employee data, recruitment processes, benefits administration and performance expectation setting. It ensures everyday Human Resources processes are manageable and easy to access. It combines human resources as a discipline and its basic HR activities and processes with the information technology field, whereas the programming of data processing systems developed into standardized routines and packages of Enterprise Resource Planning (ERP) software. On the whole, these ERP systems have their origin from software that integrates information from different applications into one universal database. The connection of its financial and human resource modules through one database is the most important to the individual and proprietarily developed lines, which makes this software application both fixed and flexible.

The HR function consists of tracking existing employee data which traditionally includes personal histories, skills, capabilities, accomplishments and salary. To reduce the manual workload of these administrative activities, organizations began to electronically automate many of these processes by introducing specialized human resource management systems. HR people rely on internal or external IT professionals to develop and maintain an HRIS. Many HR automation processes were transferred to mainframe computers that could handle large amounts of data transactions. In consequence of the high money investment needed to buy or program copyrighted software, these internally developed HRIS were limited to organizations that controlled a large amount of money.

Currently human resource management systems are described as follow:

Online **recruiting** has become one of the primary methods employed by HR departments to garner potential candidates for available positions within an organization. It includes analyzing personnel usage within an organization, and identifying potential applicants;

The **employee self-service module** allows employees to add HR related data and perform some HR transactions over the system. Employees may add their phone number to the system without asking the permission or information from HR personnel. The module also lets supervisors approve O.T. requests from their minions through the system without overloading the task on HR department.

The **HR management system** is a module covers many other HR features from application to retirement. The system records basic demographic and address data, selection, training and development, capabilities and skills management, compensation planning records and other related activities. Leading edge systems provide the ability to "read" applications and enter related data to applicable database fields, notify employers and provide position management and position control. Human resource management function involves the recruitment, placement, evaluation, compensation and development of the employees of an organization. Originally, businesses used computer-based information systems to maintain personnel records, and pursue talent management.

The **benefits administration module** provides a system for organizations to keep track employee participation in benefits programs. For examples, insurance, compensation, profit sharing, and retirement.

The performance expectation setting is the system for organization to consider performance expectation of each trainee or employee. To determine how good a person need to be for the specific qualification to be compare with the actual performance of trainee/employee

The **training module** provides a system for organizations to administer and track employee training and development efforts. The system, normally called a "learning management system" (LMS) if a standalone product, allows HR to track education, qualifications and skills of the employees, as well as outlining what training courses, books, CDs, web-based learning or materials are available to develop which skills. Courses can then be offered in date specific sessions, with delegates and training resources being mapped and managed within the same system. Sophisticated LMS's allow managers to approve training, budgets and calendars alongside performance management and appraisal metrics.

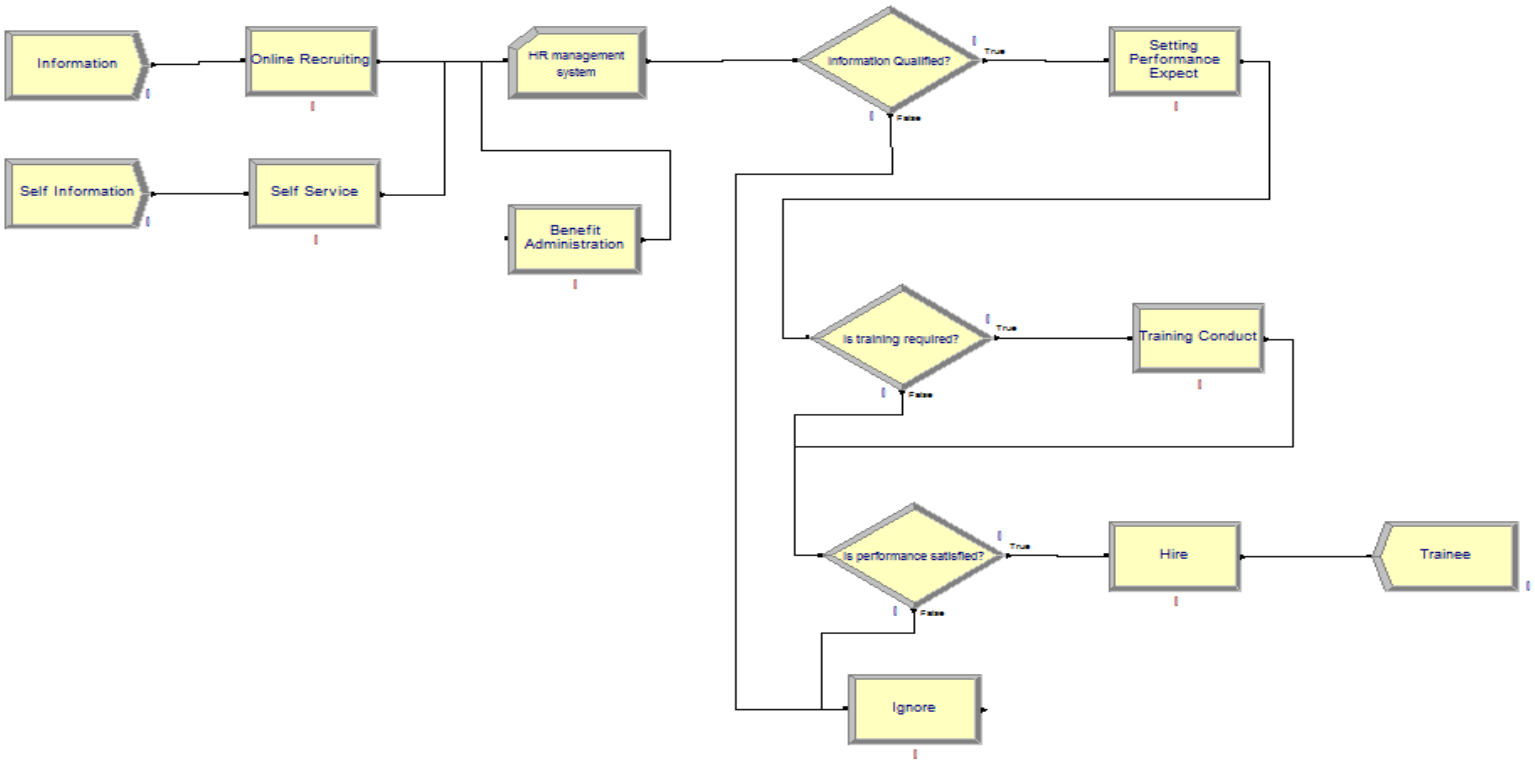


Fig. 5: Show a simulation model for HRIS

Purposed System 3

Description

This internship system is provided for organization in order to select the right person to work with the right position. This system will help HR by screening the resume one by one to see that this person has abilities in which way in order to use them with highest performance. There is interview process to ask them some questions to make sure that they are coming to the right place. Also the test process that this system will provide will asking start from general question and deeper to know that how good they are. See the figure 6 below.

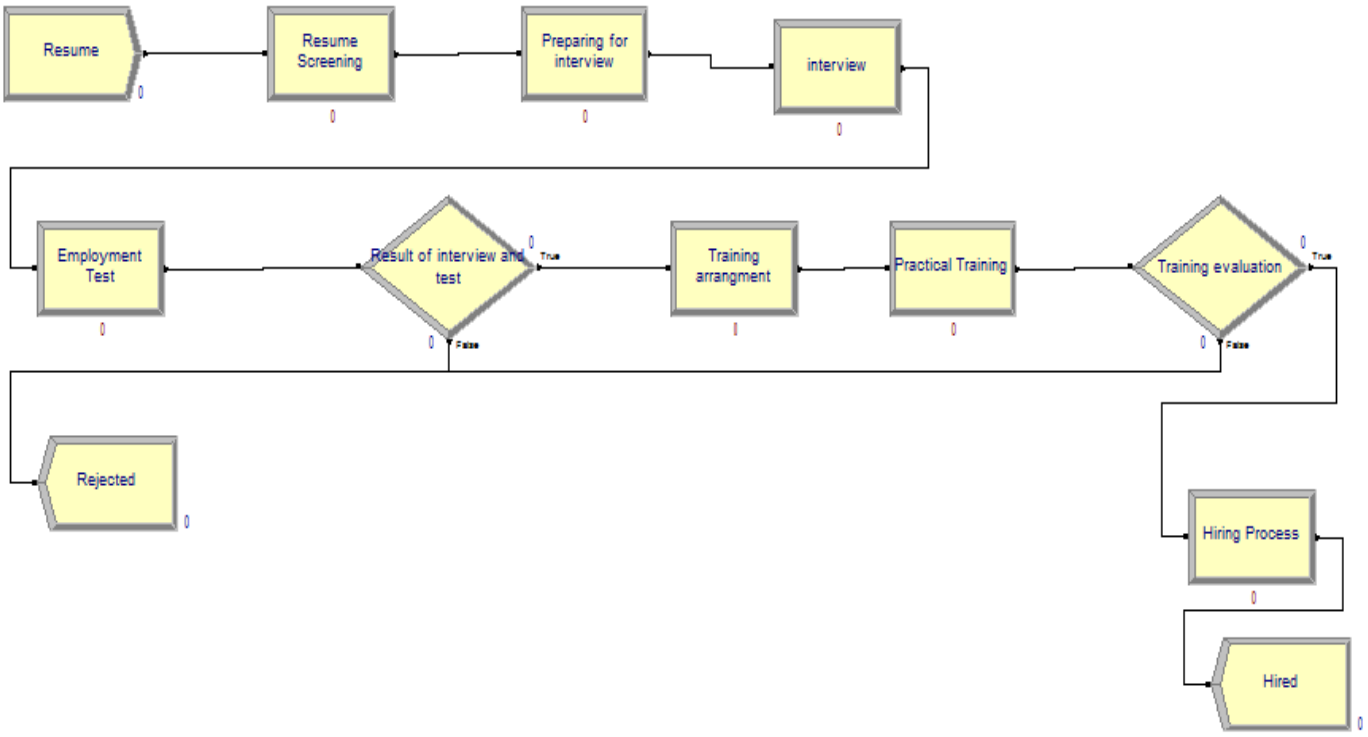


Fig. 6: Show the process of purposed system 3

1. Resume Screening

Your resume is a tool with one specific purpose: to win an interview. If it does what the fantasy resume did, it works. If it doesn't, it isn't an effective resume. A resume is an advertisement, nothing more, nothing less. A great resume doesn't just tell them what you have done but makes the same assertion to make sure that you all good. It presents you in the best light. It convinces the employer that you have what it takes to be successful in this new position or career. If you have an wonderful resume, opportunity may be yours.

Your Resume Should Be:

A concise and factual presentation of your credentials
Focused on your education, accomplishments, strengths, employment history and goals
Brief, easy to read, and grammatically well-constructed

2. Preparing interview

After screening the resume and selected the applicants for an interview. So, this process will prepare stuff and make an appointment with both interviewer and interviewee.

3. Interview

Selected person will be called to interview at the date, time provided. Interviewee must prepare themselves to be ready for an interview with several questions. The interviewer may ask about your career, personality and life and you answer honestly while trying to impress them. If you prepare well for the interview, your percentage of chance to get a job will be high as well.

4. Result of test and interview

This process will check all of the test and interview result that sent from the previous processes and see that the applicants are qualified or not. If yes, so the applicants will have a chance to work with the organization and they can prepare themselves to be ready if they pass to this process. But if they’re not pass this process, they

will be rejected by the system immediately. But they still have a chance to work in next period of internship program and they can resend their resume again next period and make sure that they are good in which way. Otherwise, they may fail again.

5. Training arrange and evaluation

Last process is about the training arrangement before going to work as a trainee. System will arrange the proper date, time, position and also will notify to the university before work. And during their inter period, they will be focused by the HR with this system and how is their style of working, their responsibility and other. And once the intern period has ended, the system will evaluate each applicants that they are satisfy or not. If it is yes, they may have a chance to work with the organization in the future after their graduation if they want to. If it is not, they will be rejected by the system immediately.

4. Running simulation model

Table 1: PTT internship system

Amount Of Input	Logical Processing Delay				Category Overview (Simulation Result)								
					Total Time			Number of Waiting			Instant usage of Resource		
	Delay Type	Min. Value	Most Likely	Max. Value	Min. Value	Average	Max. Value	Min. Value	Average	Max. Value	Min. Value	Average	Max. Value
150	Triangle	5	30	55	67.10	67.10	67.10	0	75.13	149	0	1	1
250	Triangle	5	30	55	67.10	67.10	67.10	0	75.13	149	0	1	1
400	Triangle	5	30	55	67.10	67.10	67.10	0	75.13	149	0	1	1

According to the table above, there are 3 input. Each input have tested one time with min value = 5, max value = 55 and most likely value = 55. And In the table shown that, even though the input are different but the result of total time, number of waiting and instant usage of resource are the same.

Table 2: SCG internship system

Amount Of Input	Logical Processing Delay				Category Overview (Simulation Result)								
					Total Time			Number of Waiting			Instant usage of Resource		
	Delay Type	Min. Value	Most Likely	Max. Value	Min. Value	Average	Max. Value	Min. Value	Average	Max. Value	Min. Value	Average	Max. Value
500	Triangle	5	30	55	0.5055	0.9701	1.5435	0.00	31.9752	66.00	0.00	0.9926	1.0
	Triangle	30	60	90	1.5274	2.1237	2.8596	0.00	87.7352	120.0	0.00	0.9211	1.0
	Triangle	10	45	80	0.8127	1.5437	2.2938	0.00	74.8970	147.0	0.00	0.9861	1.0
1500	Triangle	5	30	55	0.505	0.9565	1.5435	0.00	49.4271	104.00	0.00	0.9973	1.0
	Triangle	30	60	90	1.3448	2.0544	2.8596	0.00	93.7167	144.00	0.00	0.9764	1.0
	Triangle	10	45	80	0.8127	1.5656	2.2897	0.00	74.0916	145	0.00	0.9951	1.0

Table 2 shows that, the output will be change following by the logical processing delay (min value, most likely, max value). The total time, number of waiting, instant usage of resource will be increase if we increasing the number of logical processing delay.

And also the value average total time, it will increase if the number of most likely is increasing, it doesn't matter how much minimum or maximum is but if the most likely value is high, the average of total time will high as well

In addition, average number of waiting time are not stable, it also depend on the most likely value from logical processing delay. If most likely value is getting high, so the average of number of waiting will be high too.

Finally, instant usage of resource, this is not affect to the reality much because no matter how much values change, but the minimum and maximum value of instant usage of resource are the same except the average of it, but it is also just a little different. So we can say that the instant usage of resource values are quite stable.

Table 3: CP internship system

Amount Of Input	Logical Processing Delay				Category Overview (Simulation Result)								
					Total Time			Number of Waiting			Instant usage of Resource		
	Delay Type	Min. Value	Most Likely	Max. Value	Min. Value	Average	Max. Value	Min. Value	Average	Max. Value	Min. Value	Average	Max. Value
500	Triangle	5	30	55	3.3067	3.3067	3.3067	0.00	3.2826	8.0000	0.00	0.9986	1.0000
	Triangle	30	60	90	3.1950	3.1950	3.1950	0.00	4.7584	8.0000	0.00	0.9990	1.0000
	Triangle	10	45	80	4.6796	4.6796	4.6796	0.00	3.0932	8.0000	0.00	0.9987	1.0000
1500	Triangle	5	30	55	3.3067	3.3067	3.3067	0.00	3.2857	8.0000	0.00	0.9995	1.0000
	Triangle	30	60	90	6.7680	6.7680	6.7680	0.00	3.2857	8.0000	0.00	0.9995	1.0000
	Triangle	10	45	80	4.9794	4.9794	4.9794	0.00	3.2857	8.0000	0.00	0.9995	1.0000

CP internship system's table shows that, it's shown that no matter how many input amount get into the system, as the logical processing delay goes different does not make the total time of simulation of each variable much different. The total time of all variables in the table is around 3 to 7 minutes. There is no much different in the average number of waiting around 3 to 5, the maximum of number of waiting is up to 8. Because this model allows maximum arrival is only 9. Lastly, the average instantly usage of resource are grouped around 0.998-0.999. It means that the resource is used most of the time.

Additionally, the average of total time and number of waiting will consider the value of most likely from logical processing delay because it's always go up and down according to the most likely value not follow the minimum and maximum values

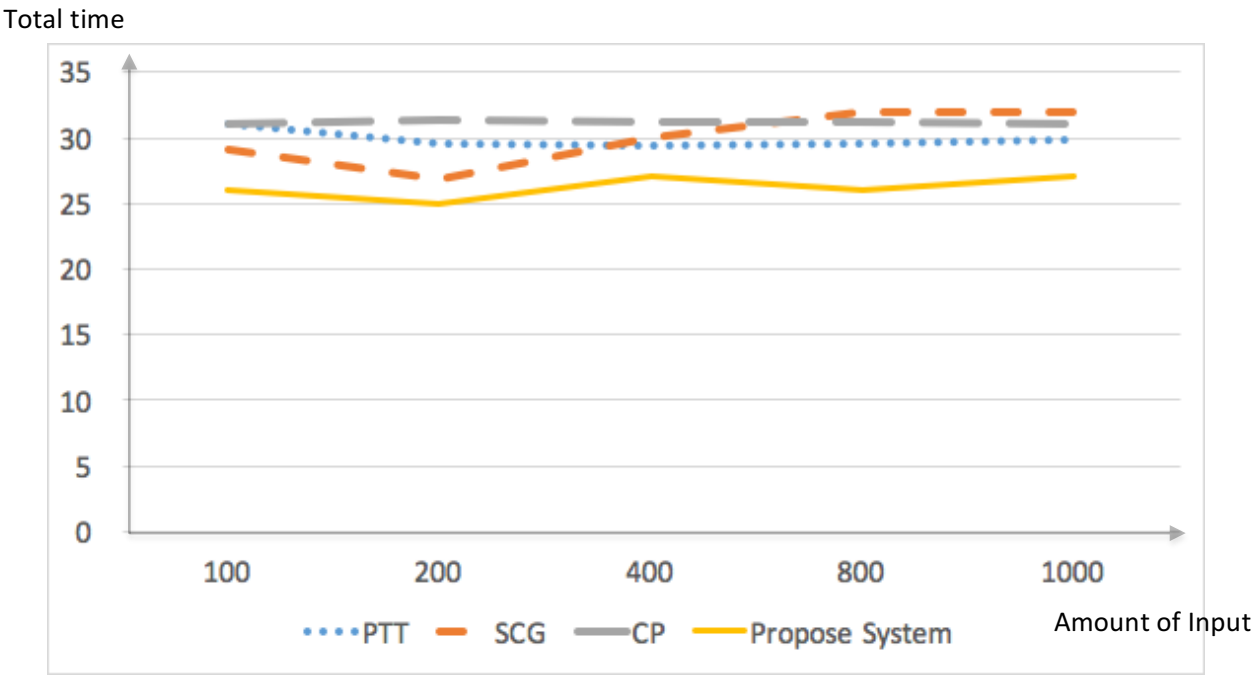
Lastly, the instant usage of resource quite stable, as you can see from the table below, the minimum and maximum value are the same and just a little change on it average value no matter how much the logical processing delay change but the instant usage of resource are always the same

Table 4: proposed system 3

Amount Of Input	Logical Processing Delay				Category Overview (Simulation Result)								
					Total Time			Number of Waiting			Instant usage of Resource		
	Delay Type	Min. Value	Most Likely	Max. Value	Min. Value	Average	Max. Value	Min. Value	Average	Max. Value	Min. Value	Average	Max. Value
30	Triangle	5	30	55	1.98	3.37	4.63	0	14.03	29	0	1	1
	Triangle	20	70	120	5.32	5.32	5.32	0	15.61	29	0	1	1
	Triangle	20	90	160	5.84	5.84	5.84	0	15.12	29	0	1	1
100	Triangle	5	30	55	3.23	3.23	3.23	0	49.66	99	0	1	1
	Triangle	20	70	120	5.32	5.32	5.32	0	51.96	99	0	1	1
	Triangle	20	90	160	5.84	5.84	5.84	0	51.30	99	0	1	1

Table 4, proposed system table shows that, two inputs are used to test with different minimum, maximum, most likely value. And it's shown that, how much different of minimum and maximum value, average total time and number of waiting also higher. And also if we have more input, we have the higher average and maximum value of number of waiting as well. Finally, doesn't matter how much input but the minimum and maximum value of instant usage of resource is between 0-1.

So, the overall values of this proposed system is quite small than other current systems so we can say that this proposed system is a development of the current systems also add and improve all performance of each processes for example use less total time and all so number of waiting time, so that the customer may get better service when they use this proposed system.



The graphs that we used to test are set the value as Minimum = 5, Most likely value = 30 and Maximum = 55

The given graphs illustrate the performance of all of the model showed in this report for understanding how number of people applies to the program affect the performance of each model which are internship program from PTT, SCG, CP and the proposed model. Among all of the model show on the graph, it can be clearly seen that the model with best performance is a model from SCG which can complete its tasks in least time, At the same time, the total time of performing all tasks of SCG is quite constant. The performance of SCG model remains unchanged no matter how many people applied to the program. While, our proposed system for the program use more time than SCG model, but the performance of the proposed system is also unchanged in changing the amount of input. The best model which is SCG can perform the tasks really well because it's separate groups of university students who apply to the programs according to the faculty they are studying. Therefore, it is easier to manage and being able to evaluate students in each groups in detail whether they are satisfied for the program or not.

These are the comparison between PTT, SCG, CP and Propose System
When we look at the graph figure 1b, range of I, 100-800 gives;

IF

$T \propto I$

$T = kI$ —1

$K = K = \frac{\Delta N}{\Delta I} = \frac{200-50}{1600-100} = \frac{1}{10} = 0.1$

THEN

$T = 0.1I$

WHERE T = Total time
I = Amount of Input

Therefore, range can be controlled similar to our proposed and others. However, when realize the range over(800-1600) of PTT, SCG and CP as the same figure above gives a new value of K which is 0.1 that shows the control of those three is not more different than others. However, SCG is take more time than other when amount of input is increasing. PTT is see to be take less time and same time while the amount of input increasing. As a result, our system can better control the situation than other while amount of inout increasing but total time is less than PTT,SCG and CP. The calculation following shows that out proposed system is better than old system.

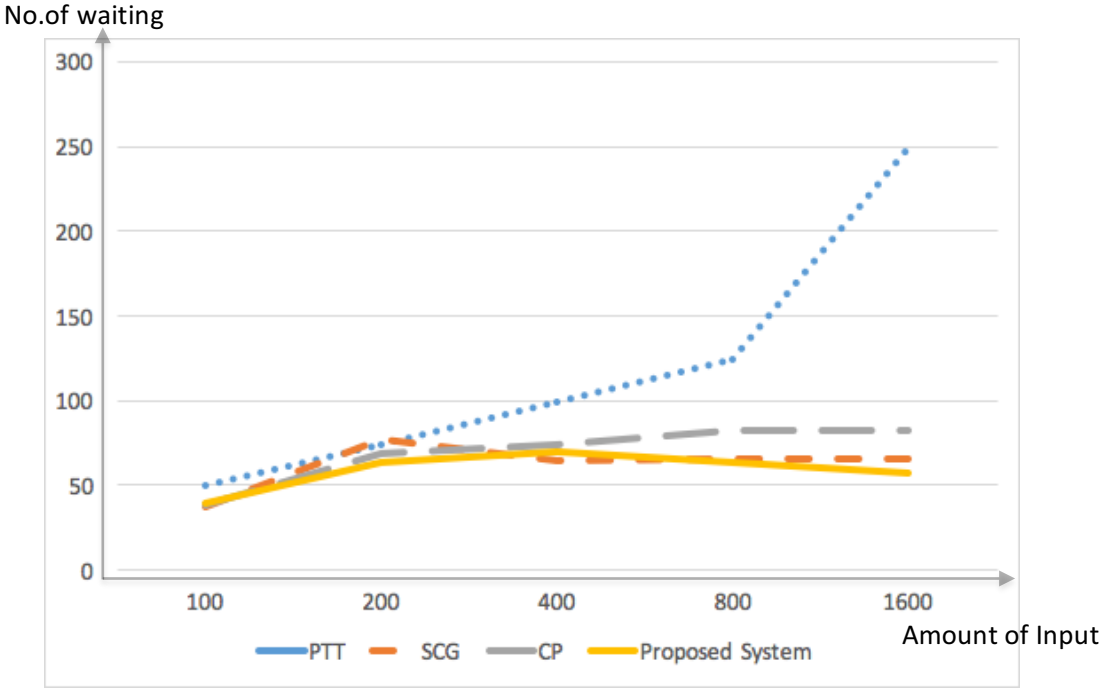
IF IF N_{PTT} , N_{SCG} and N_{CP} : Total time =30 and amount of input = 1000
$N_{Propose\ system}$: Total time = 26 and amount of input = 1000

THEN % $N_{Propose\ system}$ is greater about 4 %

$= \left(\frac{30-26}{30}\right)$ x 100%

= 13.3%

So that our proposed system is better than other system about 13.3%



When looking at the number of waiting, the line of SCG's number of waiting goes up on 200 applications applied. And tend to be constant after going down a bit. While our proposed system has least number of waiting at 200 applications applied and keep going up until 800, then tend to be constant.

Here is the comparison between PTT and CP

When consider figure 1a, range of I, 100-800 gives;

IF

$N \propto I$

$N = kI$ —1

$K = \frac{\Delta N}{\Delta I} = \frac{200-50}{1600-100} = \frac{1}{10} = 0.1$

THEN

$N = 0.1I$

WHERE N = Number of waiting

I = Amount of Input

Therefore, range can be controlled similar to our proposed and others. However, when realize the range over(800-1600) of PTT as the same figure above gives a new value of K which is 0.1 that shows the control of PTT is more different than others. However, PTT is likely same like others do.

IF N_{PTT} =260 and N_{CP}= 75

THEN % of N_{PTT} is greater than N_{CP}

$= \left(\frac{260-75}{260}\right)$ x 100%

= 71.153%

Compare SCG and Propose System

IF

$N \propto I$

$N = kI$ —1

$K = \frac{\Delta N}{\Delta I} = \frac{800-75}{1600-100} = \frac{29}{60} = 0.483$

THEN

N = 0.483I

WHERE N = Number of waiting

I = Amount of Input

Therefore, range can be controlled similar to our proposed and others. However, when realize the range over(800-1600) of SCG as the same figure above gives a new value of K which is 0.483 that shows the control of SCG is not different than others. However, SCG is likely same like others do. As a result, we see that our propose system is mostly run perfectly than other do. On other hand, SCG and our propose system is mostly same result not much different.

IF N_{SCG} =65 and $N_{Propose\ system}$= 56

THEN % of N_{SCG} is greater than $N_{Propose\ system}$

$= \left(\frac{65-56}{65}\right)$ x 100%

= 13.84%

= 13.84%

So that our proposed system is less number of waiting better than other system about 13.84%

Conclusion

In conclusion, as the information provided in this report shows that even though all of the example companies seem to be the most well-known organization in Thailand. These organizations own new technologies that support their businesses to get better result. But still, they do not have efficient system for accepting students to be in the internship program. After simulate systems from example companies that we choose and after get the result we study it, the writer has attempted to design a new system that is more efficient for this task of the internship program. After finish creating models including model of CP, SCG, PTT and also our purposed system, the researchers assign the same value to each models**.** In order to compare the performance. As the results of simulation, the graph clearly shows that our purpose system uses least time to finish their task in any amount of input. The total time of the purposed system is better than others by 60 percents. And also, the purposed system has lowest number of waiting while performing the task. It means that the purposed system has the best performance. It can be applied to any organization to enhance the efficiency of system of any internship program.