

The background features abstract, overlapping geometric shapes in various shades of green, including light lime green, medium green, and dark forest green. These shapes are primarily located on the left and right sides of the page, framing the central white area.

# ISA

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- ▶ This program consists of 8 registers
- ▶ The program can handle 5 operands
- ▶ Mov (mov r1 r2 means replace the value of r2 to r1)
- ▶ Add (add the second value to the first one)
- ▶ sub ( subtract the values)
- ▶ Div ( dividing the values)
- ▶ Mul ( multiplying the values)

# Registers

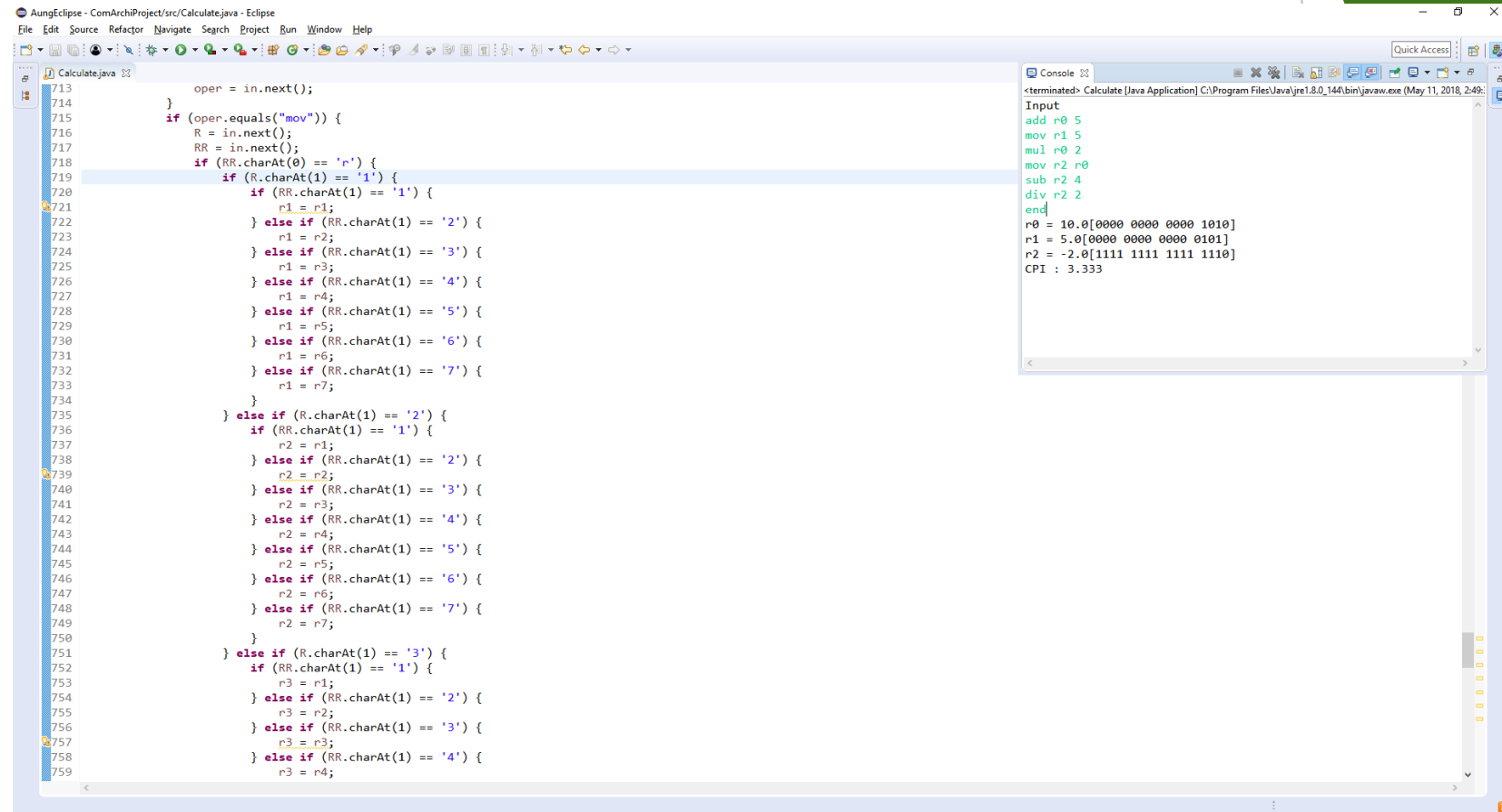
- ▶ R1
- ▶ R2
- ▶ R3
- ▶ R4
- ▶ R5
- ▶ R6
- ▶ R7

# Operands

- ▶ add (CC = 1)
- ▶ Sub (CC = 2)
- ▶ Mul (CC = 2)
- ▶ Div (CC = 2)
- ▶ Mul (CC = 2)

**CPI = total CC(clock circles) values /  
total no of CC used**

# Sample input and output



The screenshot shows the Eclipse IDE with a Java file named `Calculate.java` open. The code implements a calculator that reads an operator and two numbers, then performs the corresponding arithmetic operation. The console window shows the input `add r0 5` and the resulting output for `r0`, `r1`, `r2`, and the `CPI`.

```
713     oper = in.next();
714     }
715     if (oper.equals("mov")) {
716         R = in.next();
717         RR = in.next();
718         if (RR.charAt(0) == 'r') {
719             if (R.charAt(1) == '1') {
720                 if (RR.charAt(1) == '1') {
721                     r1 = r1;
722                 } else if (RR.charAt(1) == '2') {
723                     r1 = r2;
724                 } else if (RR.charAt(1) == '3') {
725                     r1 = r3;
726                 } else if (RR.charAt(1) == '4') {
727                     r1 = r4;
728                 } else if (RR.charAt(1) == '5') {
729                     r1 = r5;
730                 } else if (RR.charAt(1) == '6') {
731                     r1 = r6;
732                 } else if (RR.charAt(1) == '7') {
733                     r1 = r7;
734                 }
735             } else if (R.charAt(1) == '2') {
736                 if (RR.charAt(1) == '1') {
737                     r2 = r1;
738                 } else if (RR.charAt(1) == '2') {
739                     r2 = r2;
740                 } else if (RR.charAt(1) == '3') {
741                     r2 = r3;
742                 } else if (RR.charAt(1) == '4') {
743                     r2 = r4;
744                 } else if (RR.charAt(1) == '5') {
745                     r2 = r5;
746                 } else if (RR.charAt(1) == '6') {
747                     r2 = r6;
748                 } else if (RR.charAt(1) == '7') {
749                     r2 = r7;
750                 }
751             } else if (R.charAt(1) == '3') {
752                 if (RR.charAt(1) == '1') {
753                     r3 = r1;
754                 } else if (RR.charAt(1) == '2') {
755                     r3 = r2;
756                 } else if (RR.charAt(1) == '3') {
757                     r3 = r3;
758                 } else if (RR.charAt(1) == '4') {
759                     r3 = r4;
```

```
<terminated> Calculate [Java Application] C:\Program Files\Java\jre1.8.0_144\bin\javaw.exe (May 11, 2018, 2:49:
Input
add r0 5
mov r1 5
mul r0 2
mov r2 r0
sub r2 4
div r2 2
end
r0 = 10.0[0000 0000 0000 1010]
r1 = 5.0[0000 0000 0000 0101]
r2 = -2.0[1111 1111 1111 1110]
CPI : 3.333
```