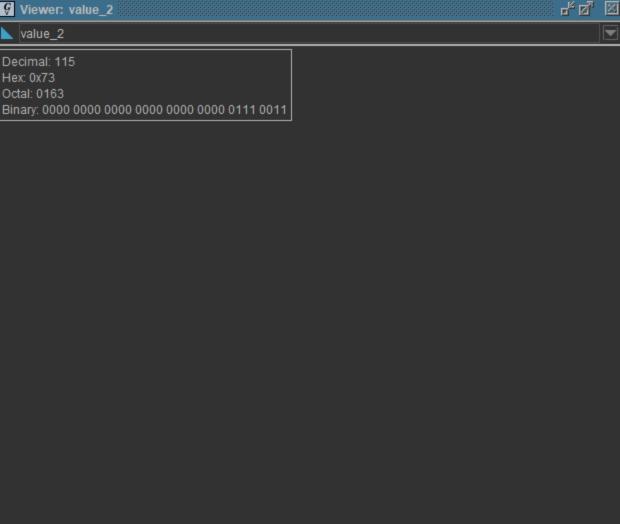
```
5 1. (15 pts) Describe what you think the most appropriate data type would be in Java for each of
6 the following variables. Include your reasons.
8 a. A double variable would work because the average level of daily radiation in Blue Bell is usually measured to two decimals.
10 b. A boolean variable would work because you either have medical insurance (true) or not (false).
12 c. A string variable would work because it is capable of storing multiple characters like a last name.
14 d. A integer variable would work because the number of apples in a bag is going to be a whole number.
16 e. A boolean variable would work because a car is either in working condition (true) or not (false).
17
19 2. (20 pts) These declarations have been made in a Java program :
                       int a = 18, b = 2;
                       float c = 3.6;
                                            (A float value should have an f after it, but I answered the questions as if c was correctly initialized as 3.6f.)
23 a) a % 4
              ANSWER: 2
24 b) ( a % 2) == 0 ANSWER: true
25 c) c / b ANSWER: 1.8
26 d) (c >= 3.1) ? 10 : -10 ANSWER: 10
27 e) a + 18 / b ANSWER: 27
28 f) (a + 19) / b ANSWER: 18
29 g) ( b != 2) ANSWER: false
30 h) b--; ANSWER: 1
31 i) a / b ANSWER: 9
                             ANSWER: 2
```

1 // Michael Cohen 2 // Midterm Q1-Q2

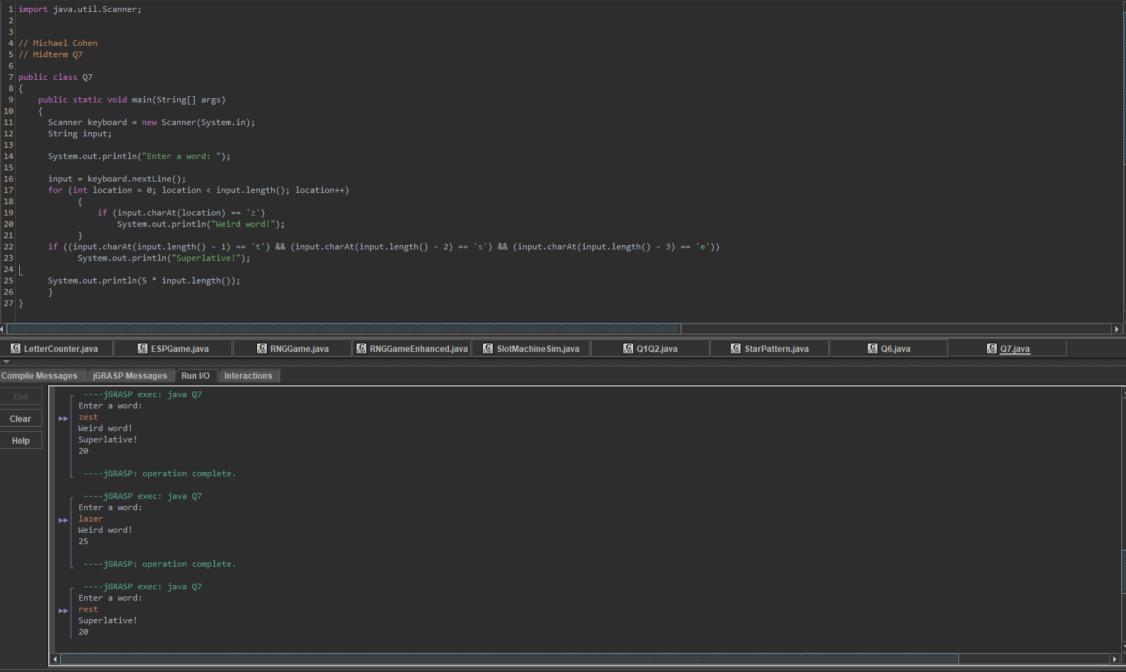
34 \*/

```
1 import java.util.Scanner;
3 // Michael Cohen
4 // Midterm Question 3
6 public class SumOfEvenNumbers
7 {
      public static void main(String[] args)
      Scanner keyboard = new Scanner(System.in);
10
11
      int num;
12
13
      System.out.print("Enter a nonzero positive integer: ");
      num = keyboard.nextInt();
14
      } while(num < 1);
15
16
17
      int count;
18
       int sum = 0;
19
      for (count = 0; count <= num; count += 2)
20
21
22
      System.out.println("The sum is equal to: " + sum);
23
24
25 }
LetterCounter.java
                          ESPGame.java
                                                  RNGGame.java
                                                                      RNGGameEnhanced.j...
                                                                                               SlotMachine Sim.java
Compile Messages
                  jGRASP Messages
                                     Run I/O
                                              Interactions
               Enter a nonzero positive integer: 99
 Clear
               The sum is equal to: 2450
 Help
                  --jGRASP: operation complete.
                   -jGRASP exec: java SumOfEvenNumbers
               Enter a nonzero positive integer: 6
               The sum is equal to: 12
                  --jGRASP: operation complete.
```

```
1 // Michael Cohen
2 // Midterm O4
7 4. (10 pts) Explain how the following work together to help programmers produce working
8 code:
9 • Integrated Development Environment
10 • Compiler
14 An integrated development environment (IDE) is a program that has many tools including code editor, compiler, and debugger. The tools in IDE's makes it easier to put your code together.
15 A compiler takes the source code (code written by a programmer) and converts it into something the computer can understand (machine code).
16 If there are any errors while the code is being compiled, then the IDE has a debugger that will display where the error occurs.
```



```
1 import java.util.Scanner;
                                                                                                                                                          ----iGRASP exec: java 06
                                                                                                                                                        Enter a series of numbers:
                                                                                                                                          Clear
4 // Michael Cohen
5 // Midterm Q6
                                                                                                                                           Help
                                                                                                                                                        Enter a series of numbers:
7 public class Q6
8 {
      public static void main(String[] args)
                                                                                                                                                        Enter a series of numbers:
        Scanner keyboard = new Scanner(System.in);
        int input = 1;
                                                                                                                                                        Enter a series of numbers:
                                                                                                                                                        Enter a series of numbers:
           System.out.println("Enter a series of numbers: ");
           input = keyboard.nextInt();
                                                                                                                                                        Enter a series of numbers:
           if (input == 0) //fixes glitch where FIZZBUZZ is printed before end of program.
              break:
           if (input % 3 == 0)
                                                                                                                                                        Enter a series of numbers:
              System.out.print("FIZZ");
           if (input % 5 == 0)
                                                                                                                                                        FIZZBUZZ
              System.out.print("BUZZ");
                                                                                                                                                        Enter a series of numbers:
           if (input % 3 != 0 && input % 5 != 0)
              System.out.print(input);
           System.out.println();
```



```
2 // Midterm Q8
4 public class Q8
       public static void main(String[] args)
         for (int count = 1; count < 6; count++)
10
11
                    if (count == 1)
                      System.out.println("....1");
12
13
14
                      System.out.println("...22");
15
16
                      System.out.println("...333");
17
                      System.out.println(".4444");
18
19
20
                      System.out.println("55555");
21
                }[
22
23 }
                                                  🥵 Q1Q...
🙎 Lett...
         ESP...
                   🧟 RNG...
                             🥵 RNG...
                                        Slot...
                                                            🥵 Star...
                                                                       🥵 Q7.j... 🖁 🕵 Sum...
                                                                                           <u>€</u> Q8
Compile Messages
                   jGRASP Messages
                                       Run I/O
                                                 Interactions
                  ...1
 Clear
                 . . . 22
                ..333
 Help
                .4444
                     -jGRASP: operation complete.
```