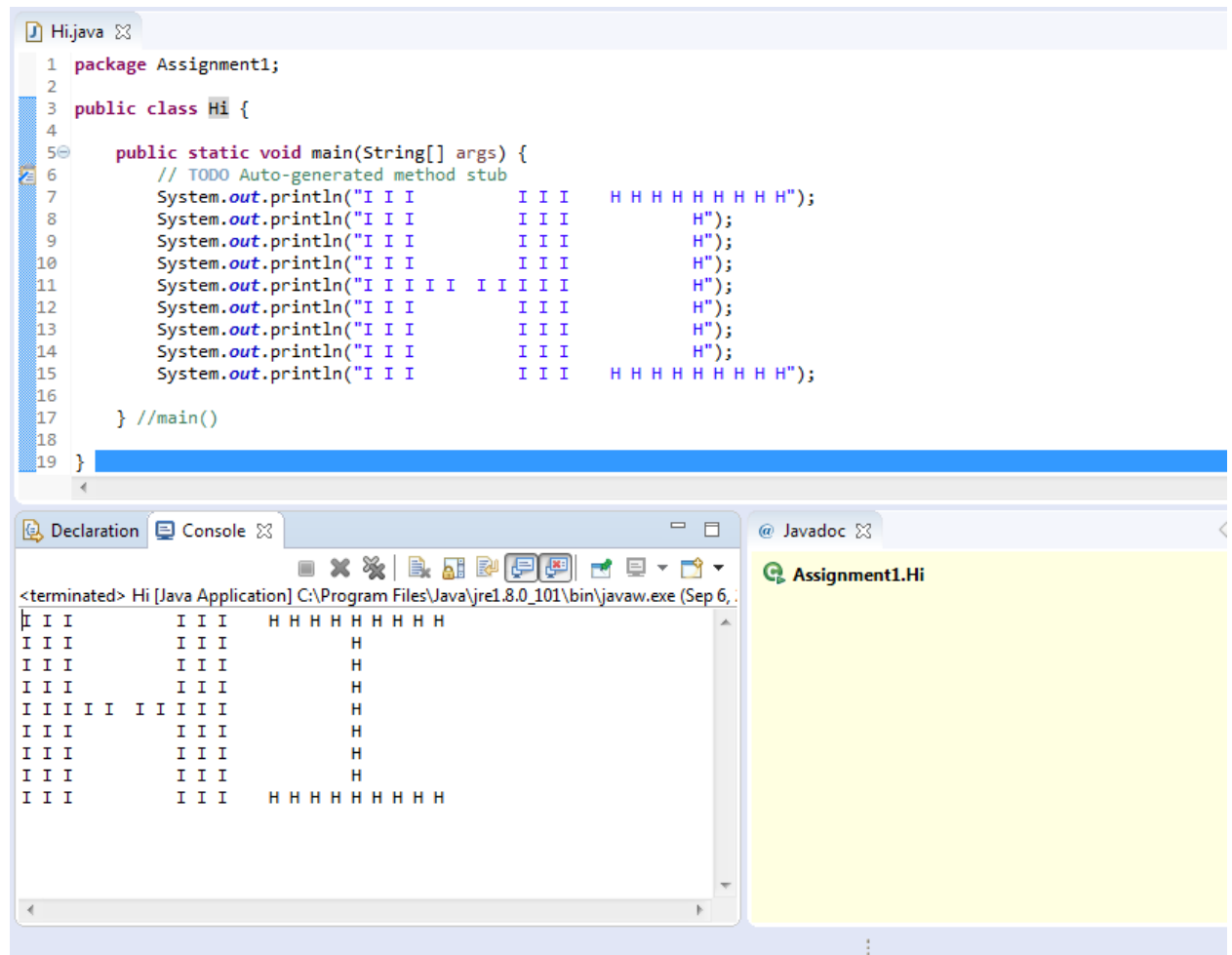


## **Assignment #1**

Name: Jenet Baribeau  
Course: CECS 220-01-4168  
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## 1. PP 1.10

Everything is outputted on a screen utilizing the `System.out.println`. By printing the letters to recreate the picture provided in the book example. I created the public class like the default recommended in the Tegrity classes on Blackboard.



The screenshot displays an IDE with two main panels. The top panel shows the source code for `Hi.java`, and the bottom panel shows the console output and Javadoc.

```
1 package Assignment1;
2
3 public class Hi {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         System.out.println("I I I      I I I      H H H H H H H H");
8         System.out.println("I I I      I I I      H");
9         System.out.println("I I I      I I I      H");
10        System.out.println("I I I      I I I      H");
11        System.out.println("I I I I I I I I I I      H");
12        System.out.println("I I I      I I I      H");
13        System.out.println("I I I      I I I      H");
14        System.out.println("I I I      I I I      H");
15        System.out.println("I I I      I I I      H H H H H H H H");
16
17    } //main()
18
19 }
```

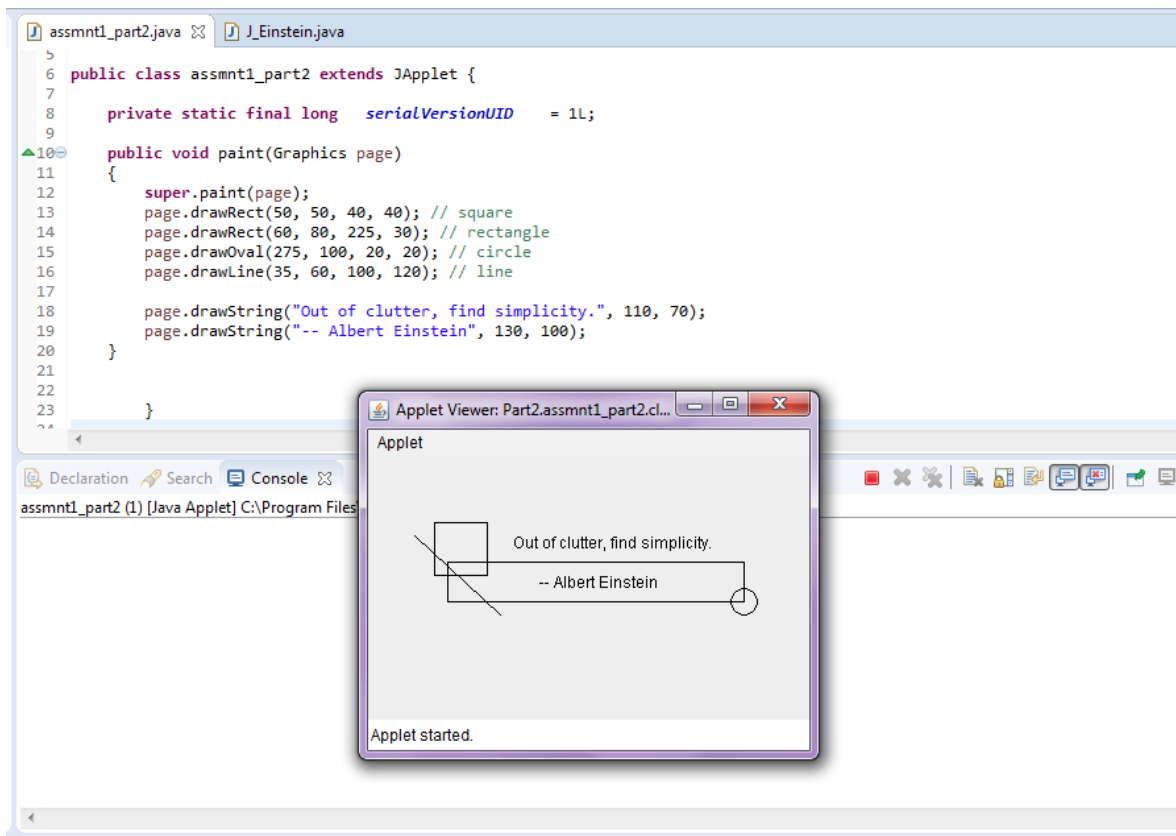
The console output shows the execution of the program, displaying the ASCII art of the letter 'H' as described in the code. The output is as follows:

```
<terminated> Hi [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Sep 6, 2016 10:10:10 AM)
I I I      I I I      H H H H H H H H
I I I      I I I      H
I I I      I I I      H
I I I      I I I      H
I I I I I I I I I I      H
I I I      I I I      H
I I I      I I I      H
I I I      I I I      H
I I I      I I I      H
I I I      I I I      H H H H H H H H
```

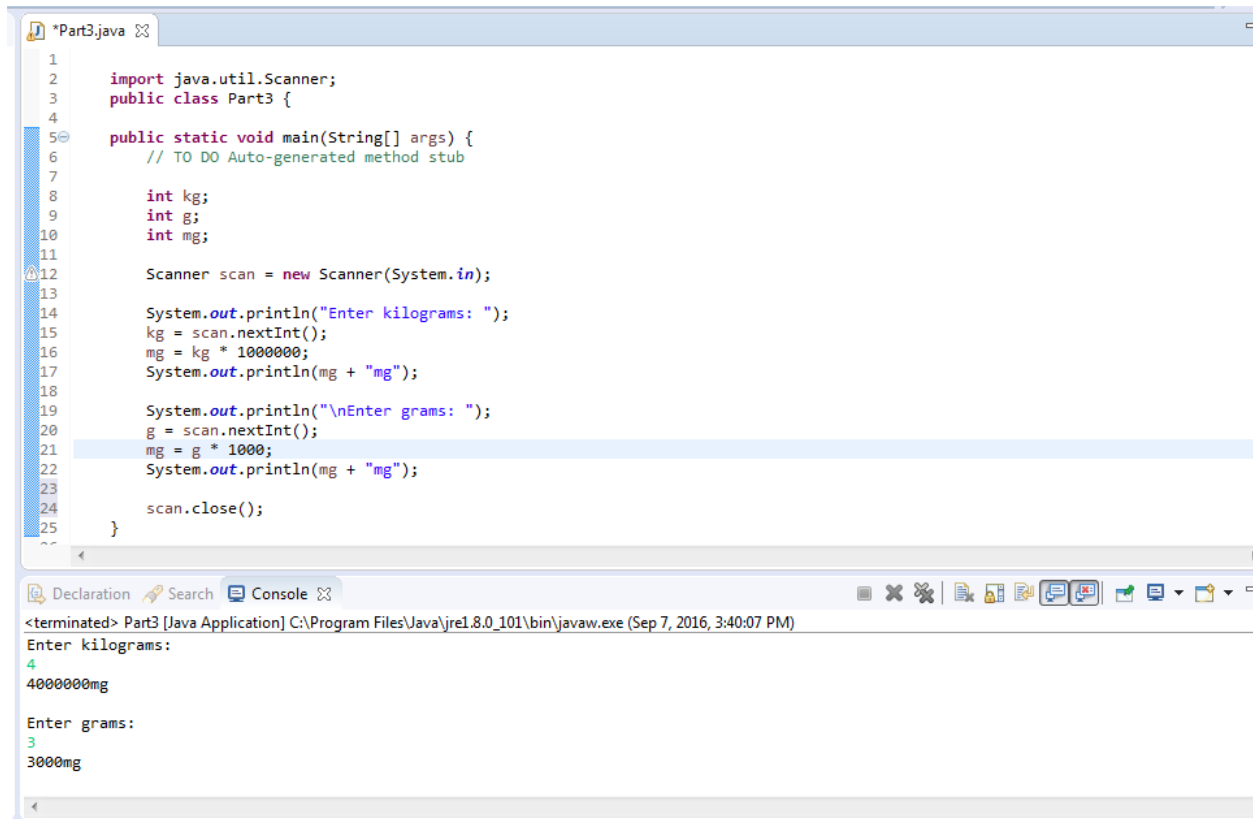
The Javadoc panel on the right shows the class `Assignment1.Hi`.

## 2. PP2.8

I used the code provided from the example in class. After some consideration to either just change the location of the oval or re-orient the x-y axis, I determined it would be easier to edit the numbers of the oval. It took a minute of trial and error. I'm sure it would be far more accurate to do it a different way.



- Created variables to represent the input received from the user for the various weights needed. Used the Scanner import recommended by the Java book. Asked the application to scan for input, do the math and then output the result. I tried to do 2 scans together for the kg/mg & g/mg but it didn't work. So I rearranged the each element together so each had a scan, calculation & an output.



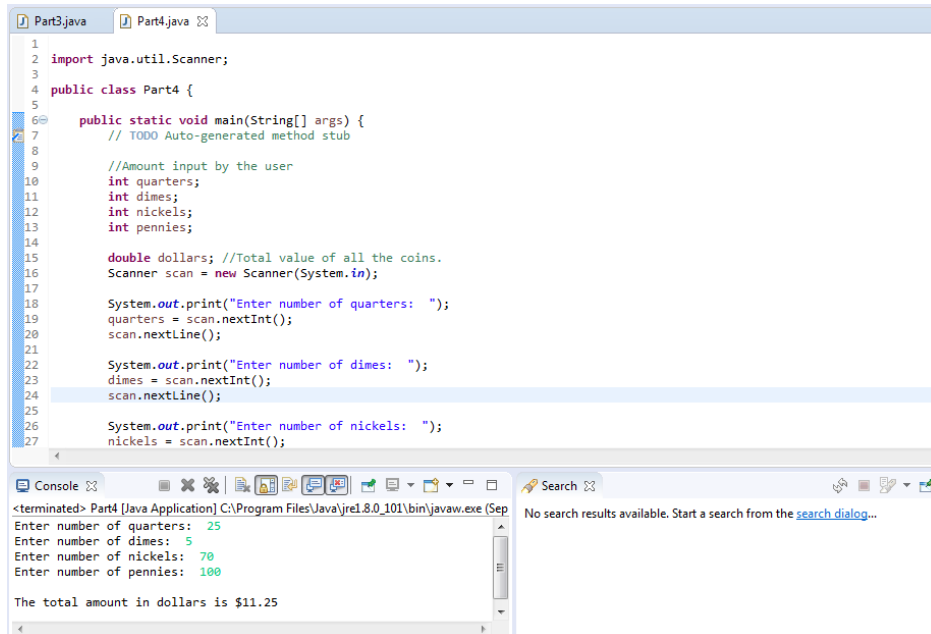
```
1
2 import java.util.Scanner;
3 public class Part3 {
4
5     public static void main(String[] args) {
6         // TO DO Auto-generated method stub
7
8         int kg;
9         int g;
10        int mg;
11
12        Scanner scan = new Scanner(System.in);
13
14        System.out.println("Enter kilograms: ");
15        kg = scan.nextInt();
16        mg = kg * 1000000;
17        System.out.println(mg + "mg");
18
19        System.out.println("\nEnter grams: ");
20        g = scan.nextInt();
21        mg = g * 1000;
22        System.out.println(mg + "mg");
23
24        scan.close();
25    }
26 }
```

<terminated> Part3 [Java Application] C:\Program Files\Java\jre1.8.0\_101\bin\javaw.exe (Sep 7, 2016, 3:40:07 PM)

Enter kilograms:  
4  
4000000mg

Enter grams:  
3  
3000mg

- First, I created all the variables I would need to hold the data entered. Scan for each item provided by the user using a return after each entry. Do the calculations necessary the output. The formatting printf I found on Oracle's website. The scan.close() was provided because I kept getting an error that "Scan" was not closed, so I closed it.

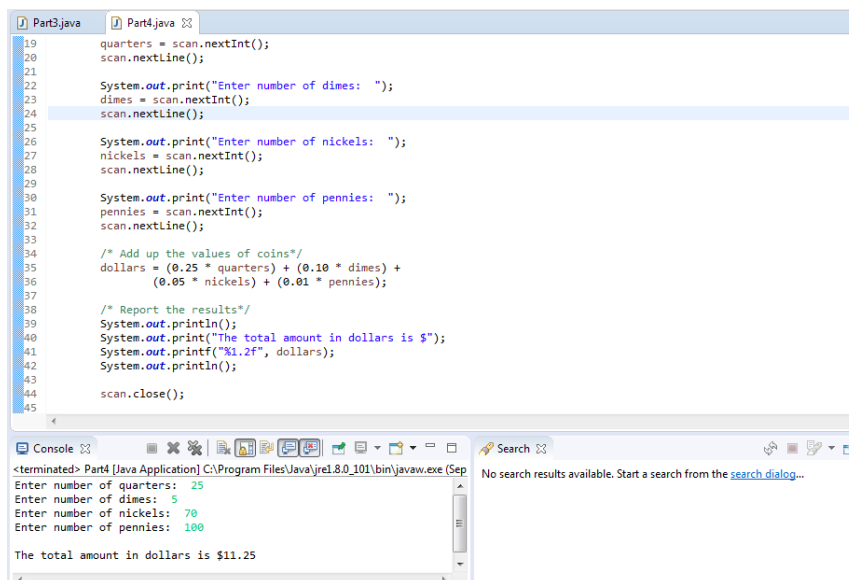


```
1  import java.util.Scanner;
2
3
4  public class Part4 {
5
6      public static void main(String[] args) {
7          // TODO Auto-generated method stub
8
9          //Amount input by the user
10         int quarters;
11         int dimes;
12         int nickels;
13         int pennies;
14
15         double dollars; //Total value of all the coins.
16         Scanner scan = new Scanner(System.in);
17
18         System.out.print("Enter number of quarters: ");
19         quarters = scan.nextInt();
20         scan.nextLine();
21
22         System.out.print("Enter number of dimes: ");
23         dimes = scan.nextInt();
24         scan.nextLine();
25
26         System.out.print("Enter number of nickels: ");
27         nickels = scan.nextInt();
```

Console

```
<terminated> Part4 [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Sep
Enter number of quarters: 25
Enter number of dimes: 5
Enter number of nickels: 70
Enter number of pennies: 100

The total amount in dollars is $11.25
```



```
19         quarters = scan.nextInt();
20         scan.nextLine();
21
22         System.out.print("Enter number of dimes: ");
23         dimes = scan.nextInt();
24         scan.nextLine();
25
26         System.out.print("Enter number of nickels: ");
27         nickels = scan.nextInt();
28         scan.nextLine();
29
30         System.out.print("Enter number of pennies: ");
31         pennies = scan.nextInt();
32         scan.nextLine();
33
34         /* Add up the values of coins*/
35         dollars = (0.25 * quarters) + (0.10 * dimes) +
36                 (0.05 * nickels) + (0.01 * pennies);
37
38         /* Report the results*/
39         System.out.println();
40         System.out.print("The total amount in dollars is $");
41         System.out.printf("%.2f", dollars);
42         System.out.println();
43
44         scan.close();
45
```

Console

```
<terminated> Part4 [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Sep
Enter number of quarters: 25
Enter number of dimes: 5
Enter number of nickels: 70
Enter number of pennies: 100

The total amount in dollars is $11.25
```

5. Not dissimilar to the text book example. Create the variable necessary to hold the values entered by the user. Scan for the entries. Calculate the formula and output the algorithm.



```
Part5.java
1
2 import java.util.Scanner;
3
4 public class Part5 {
5
6
7     public static void main(String[] args) {
8         // TODO Auto-generated method stub
9         double L;
10        double W;
11
12        Scanner scanLength = new Scanner(System.in);
13        System.out.print("Please enter the length of the rectangle: ");
14        L = scanLength.nextDouble();
15
16        System.out.print("Please enter the width of the rectangle: ");
17        W = scanLength.nextDouble();
18
19
20        double rectangleArea = (L * W);
21        System.out.println("The area of the rectangle = " + rectangleArea );
22
23        double rectanglePerimeter = (L*2)+(W*2);
24        System.out.println("The perimeter of the rectangle = " + rectanglePerimeter);
25
26        scanLength.close();
27    }
}
```

Console

<terminated> Part5 [Java Application] C:\Program Files\Java\jre1.8.0\_101\bin\javaw.exe (Sep 7, 2016, 8:19:03 PM)

Please enter the length of the rectangle: 9

Please enter the width of the rectangle: 5

The area of the rectangle = 45.0

The perimeter of the rectangle = 28.0