

CS112 Worksheet 4

1. For the following segment of code, what is the output?

```
int a = 1;
int b = 2;
a = a + b;
b = a + b;
System.out.println("a = " + a);
System.out.println("b = " + b);
```

<pre>a = 3 b = 5</pre>

2. Read the user's nickname from the keyboard, and then output a greeting message to the monitor?

```
String nickName;
nickName = input.next();
System.out.println("Hello, " + nickName);
```

3. Prompt and let the user input either "M" (Male) or "F" (Female). If the input is "M", the code output "You are a boy." Otherwise, output "You are a girl".

```
System.out.print(Choose (M/F): ");
String gender = input.next(); // "M", "m", "F", "f"
if(gender.equalsIgnoreCase("M"))
    System.out.println("You are a boy");
else if(gender.equalsIgnoreCase("F"))
    System.out.println("You are a girl");
```

4. Prompt and let the user input one of the following, "F", "S", "J", "SE". If the input is "F", output "You are a freshman", and so on.

```
System.out.print(Your grade (F/S/J/SE): );
String grade = input.next();
if(grade.equalsIgnoreCase("F"))
    System.out.println("You are a freshman");
else if(grade.equalsIgnoreCase("S"))
    System.out.println("You are a sophomore");
else if(grade.equalsIgnoreCase("J"))
    System.out.println("You are a junior");
else if(grade.equalsIgnoreCase("SE"))
    System.out.println("You are a senior");
```

5. Prompt and let the user input either "C" or "F". If the input is "C", the code will read the temperature in Celsius and convert to it in Fahrenheit ($F = 9/5C + 32$). Otherwise, the code will read the temperature in Fahrenheit and convert to it in Celsius ($C = 5/9(F - 32)$).

```
System.out.print("Choose (C/F): ");
String choice = input.next();
if(choice.equalsIgnoreCase("C"))
{
    System.out.print("Temp. in Celsius: ");
    double cel = input.nextDouble();
    double fah = 9.0/5 * cel + 32;
    System.out.println("Temp. in Fahrenheit: " + fah);
}
else if(choice.equalsIgnoreCase("F"))
{
    System.out.print("Temp. in Fah.: ");
    double fah = input.nextDouble();
    double cel = 5.0/9 * (fah - 32.0);
    System.out.println("Temp. in Celsius: " + cel);
}
```