Basic Programming Practicum
Jobsheet 4 Selection 1 Assignment

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Class
1i

Department
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1 Assignment

1. Create a program to input two integers, then print on with the largest value!

```java
import java.util.Scanner;

public class TwoIntegers {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);

        System.out.print("Please insert the first number: ");
        int number1 = input.nextInt();
        System.out.print("Please insert the second number: ");
        int number2 = input.nextInt();

        if (number1 > number2) {
            System.out.println("The first number is greater than the second number");
        } else if (number1 < number2) {
            System.out.println("The second number is greater than the first number");
        } else {
            System.out.println("The first number and the second number is equal");
        }

        input.close();
    }
}
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  GITLENS

uni-stuff/basic-programming-practicum/2022-09-29/jobsheet-4/codes/assignment on  master (!?) v
❯ javac TwoIntegers.java && java TwoIntegers
Please insert the first number: 8
Please insert the second number: 9
The second number is greater than the first number
uni-stuff/basic-programming-practicum/2022-09-29/jobsheet-4/codes/assignment on  master (!?) v
❯ javac TwoIntegers.java && java TwoIntegers
Please insert the first number: 10
Please insert the second number: 2
The first number is greater than the second number
```

Figure 1: Comparing two integers

2. Observe the following flowchart!

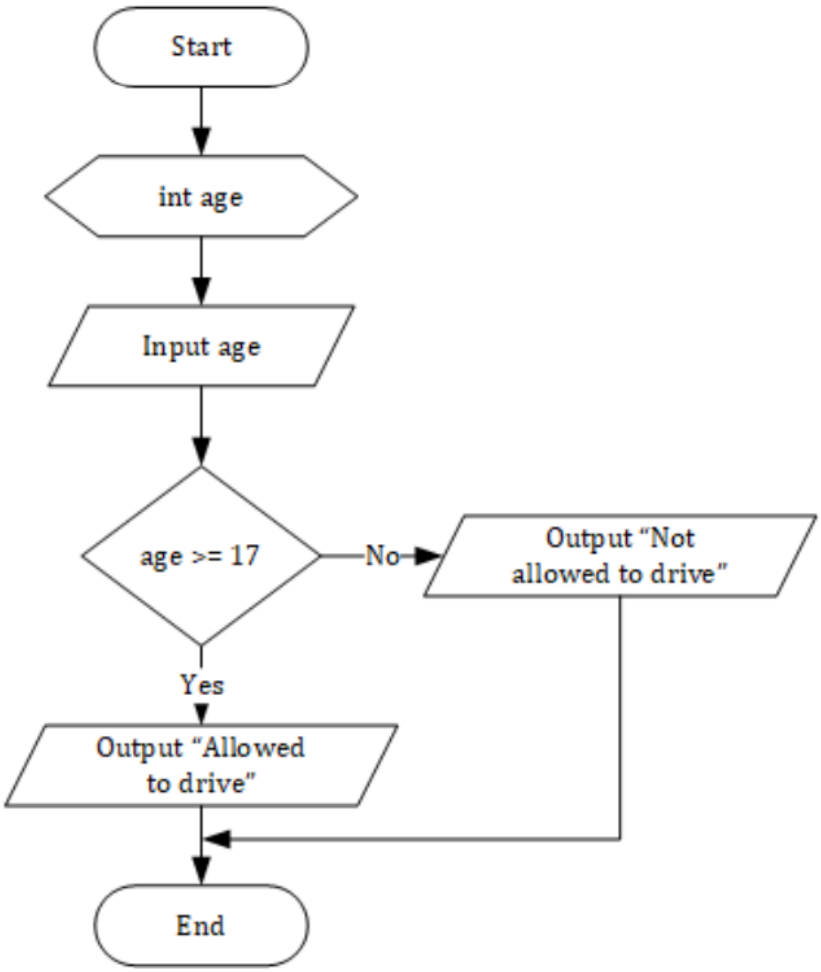


Figure 2: Flowchart

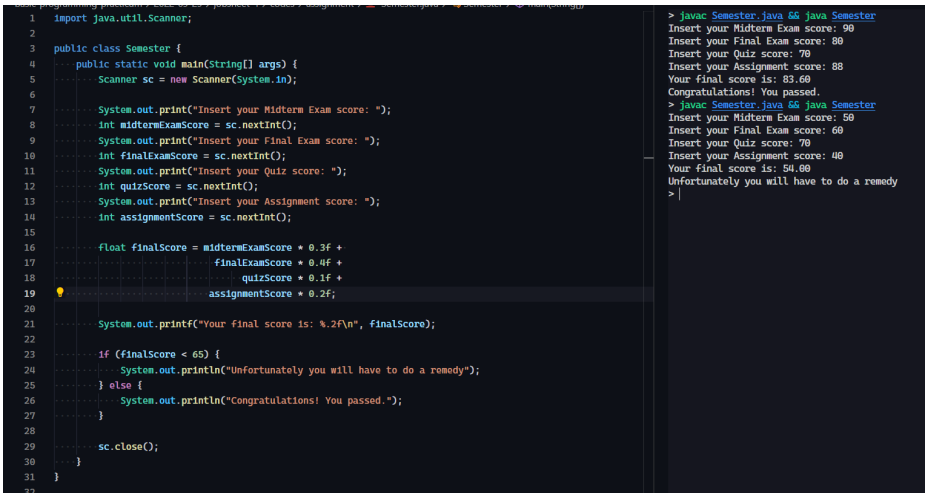
Write program code according to the flowchart!

```java
import java.util.Scanner;

public class FlowchartAge {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        int age;

        System.out.print("Please insert your age: ");
        age = input.nextInt();

        if (age >= 17) {
            System.out.println("Allowed to drive");
        } else {
            System.out.println("Not allowed to drive");
        }

        input.close();
    }
}
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  GITLENS
uni-stuff/basic-programming-practicum/2022-09-29/jobsheet-4/codes/assignment on  master (!?) vi
❮ javac FlowchartAge.java && java FlowchartAge
Please insert your age: 16
Not allowed to drive
uni-stuff/basic-programming-practicum/2022-09-29/jobsheet-4/codes/assignment on  master (!?) vi
❯ javac FlowchartAge.java && java FlowchartAge
Please insert your age: 18
Allowed to drive
```

Figure 3: Implementation based on the Flowchart

3. At the end of the semester a lecturer calculates the final score of students which consists of midterm exam score, final exam score, quiz scores, and assignment scores. The final score is obtained from 30% of midterm exams core, 40% of final exam score, 10% of quiz scores, and 20% of assignment scores. If the final score of the student is less than 65, then the student will get a remedy. Create a program to help determine which students get remedies based on the final score they received!



```java
import java.util.Scanner;

public class Semester {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        System.out.print("Insert your Midterm Exam score: ");
        int midtermExamScore = sc.nextInt();
        System.out.print("Insert your Final Exam score: ");
        int finalExamScore = sc.nextInt();
        System.out.print("Insert your Quiz score: ");
        int quizScore = sc.nextInt();
        System.out.print("Insert your Assignment score: ");
        int assignmentScore = sc.nextInt();

        float finalScore = midtermExamScore * 0.3f +
                           finalExamScore * 0.4f +
                           quizScore * 0.1f +
                           assignmentScore * 0.2f;

        System.out.printf("Your final score is: %.2f\n", finalScore);

        if (finalScore < 65) {
            System.out.println("Unfortunately you will have to do a remedy");
        } else {
            System.out.println("Congratulations! You passed.");
        }

        sc.close();
    }
}
```

```
> javac Semester.java && java Semester
Insert your Midterm Exam score: 90
Insert your Final Exam score: 80
Insert your Quiz score: 70
Insert your Assignment score: 88
Your final score is: 83.60
Congratulations! You passed.
> javac Semester.java && java Semester
Insert your Midterm Exam score: 50
Insert your Final Exam score: 60
Insert your Quiz score: 70
Insert your Assignment score: 40
Your final score is: 54.00
Unfortunately you will have to do a remedy
>
```

Figure 4: Semester score calculation implementation