Assignment 2

Section 1: Error-Driven Learning in Java

Snippet 1

- Errors
    i. Class was public
    ii. Main method was not static.

- Correct Code:

```
class Main {
 public static void main(String[] args) {
 System.out.println("Hello, World!");
}
}
```

Snippet 2

- Errors
    i. Class was public
    ii. Main method was not found because public word was not there

- Correct Code:

```
class Main {
   public static void main(String[] args) {
      System.out.println("Hello, World!");
   }
}
```

Snippet 3

- Errors
  i. Class was public
  ii. Main method includes int instead of void as it should return value of type void.
  iii. } was missing at last
- Correct Code:

```
class Main {
 public static void main(String[] args) {
System.out.println("Hello, World!");
return ;
  }
 }
```

Snippet 4

- Errors:String args was not present, its used to pass command line argument to program
- Correct Code:

```
 class Main {
 public static void main(String[] args) {
System.out.println("Hello, World!");
return ;
 } }
```

Snippet 5

- Errors
  Two main methods were present but only one gets executed with string argument
- Correct Code:

```
class Main {
public static void main(String[] args) {
System.out.println("Main method with String[] args");
public static void main(int[] args) {
System.out.println("Overloaded main method with int[] args");
} }
```

Snippet 6

- Errors

  Variables must be declared withot it execution wont take place.

- Correct Code:

```
 class Main {
 public static void main(String[] args) {
 int y=2;
int x = y + 10;
System.out.println(x);
  }
}
```

Snippet 7

Errors : String cannot initialized to int datatype.

Snippet 8

Errors: Bracket and semicolon missing

Snippet 9

Errors: Can’t use keyword as variables

Snippet 10

- Errors

  Create objects of class and then call method overloading is allowed.

- Correct Code:

```
class Main {
 public void display() {
```

```
System.out.println("No parameters");   }
public void display(int num) {
System.out.println("With parameter: " + num);   }
 public static void main(String[] args) {
Main m = new Main();
m.display();
  m.display(5);
   }
}
```

Snippet 11

- Errors

  Out of bound exception for array. I used 2 instead of 5

  0-1,1-2,2-3

- Correct code:

```
class Main {
   public static void main(String[] args) {
      int[] arr = {1, 2, 3};
      System.out.println(arr[0]);
   }
}
```

Snippet 12

- Errors

  Infinite loop to stop it, Use the break function.

Snippet 13

- Errors

  Null Pointer Exception

  Put the valid string example yogesh.

Snippet 14

- Errors: String cannot be converted to double, So make datatype String.

Snippet 15

- Errors: lossy conversion from double to int, so make datatype of result as double.

Snippet 16

Yes. output is 2.0

Snippet 17

** is not accepted. use * because there can be many meaning of **.

Snippet 18

Will perform only 1st operator, but we can use bracket then action takes place

Snippet 19

Arithmetic exception not acceptable for integers

Snippet 20

Semicolon is missing so sop statement wont print.

Snippet 21

Error: reached end of file while parsing

Snippet 22

Error: illegal start of expression, we cannot declare method inside method.

Snippet 23

Put the break function after statements of cases.

Snippet 24

Put the break function after statements of cases.

Snippet 25

Do typecasting below: switch((int)score)

Snippet 26

Duplicate case label not allowed, wont compile

Section 2: Java Programming - Conditional Statements

Question 1: grade classification

```
class Grades {
   public static void main(String[] args) {
    int score = 82;
                if(score>=90){
                System.out.println("A");
                }
                else if(score>=80 && score<=89){
                System.out.println("B");
                }
                else if (score>=70 && score<=79){
                System.out.println("C");
                }
                else if (score>=60 && score<=69){
                System.out.println("D");
                }
                else{
```

```
        System.out.println("F");
        }
        }
        }
```

Question 2: Days of the Week

```
class DayWeek {
public static void main(String args[]){
    int day = 1;
switch(day){
    case 1: System.out.println("Today is mon n week");
    break;
    case 2:
    System.out.println("Today is tues n week");
    break;
    case 3:
    System.out.println("Today is wedn n week");
    break;
    case 4:
    System.out.println("Today is thur n week");
    break;
    case 5:
    System.out.println("Today is fri n week");
    break;
    case 6:
    System.out.println("Today is sat n weekend");
```

```
        break;
        case 7:
        System.out.println("Today is sun n weekend");
        break;}}}
```

Question 3: Calculator

```
import java.io.*;
import java.util.*;
class calculator {
        public static void main(String[] args) {
         int a, b;
                 char operator;
                String operation;
                Scanner sc = new Scanner(System.in);
                System.out.print("Enter a first number:");
                a = sc.nextInt();
                System.out.print("Enter a second number:");
                b = sc.nextInt();
                        System.out.print("Enter operator:");
                operator = sc.next().charAt(0);
                        //System.out.print("Enter the operation:");
                //operation = sc.next();

                switch (operator) {
                   case '+':
```

```
                System.out.println("Addition is" + (a + b));
                break;
            case '-':
            System.out.println("Substraction is" + (a - b));
            break;
        case '*':
            System.out.println("Multiplication is" + (a * b));
            break;
        case '/':
            if (b == 0) {
              System.out.println("Error: Divide by zero is not
              allowed!");
            } else {
                System.out.println("Dividation is" + (a / b));
            }
            break;
        case '%':
            System.out.println("Modulation is" + (a % b));
            break;
        default:
            System.out.println("Invalid request!");
            break;
    }
    sc.close();
}}
```

Question 4: Discount Calculation

```
class Discount {

public static void main(String args[]){
Scanner sc = new Scanner(System.in);
System.out.println("Enter price ");
   int price =sc.nextInt();
   System.out.println("Enter 1 if membership present else 0");
int membership = sc.nextInt();
   if(price >=1000){
      if(membership==1){
         System.out.println("Discount is : " + ((price*25)/100));
      }else{
         System.out.println("Discount is : "+(price*20)/100);
      }
   }else if(price >=500 && price<=999){
      if(membership==1){
         System.out.println("Discount is : "+(price*15)/100);
      }else{
      System.out.println("Discount is : "+(price*10)/100);
   }
   }else{
      if(membership==1){
System.out.println("Discount is : "+(price*10)/100);
      }else{
      System.out.println("Discount is : "+(price*5)/100);
   }
   }
}
}
```

Question 5:Pass Fail

```
class Passfail {
   public static void main(String[] args) {

int sub1 = 50;
int sub2 = 20;
int sub3 = 30;

if(sub1>40 && sub2>40 && sub3>40){
System.out.println("passed in all");
}

else if(sub1>40 && sub2<=40 && sub3<=40){
System.out.println("failed in 2 subjects");
}

else if(sub2>40 && sub1<=40 && sub3<=40){
System.out.println("failed in 2 subjects");
}

else if(sub3>40 && sub1<=40 && sub2<=40){
System.out.println("failed in 2 subjects");
}

else{
System.out.println("Failed in all subjects");
}

}
}
```