JAVA PROGRAMMING- BCSE103E

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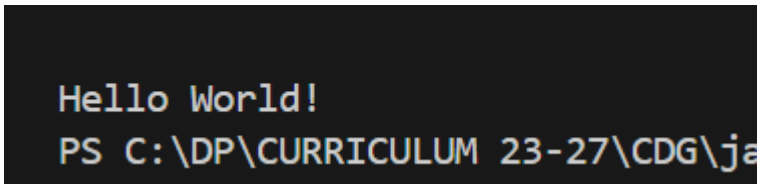
GITHUB: https://github.com/naveen-orb26/Java_Fall_24-25.git

1.

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

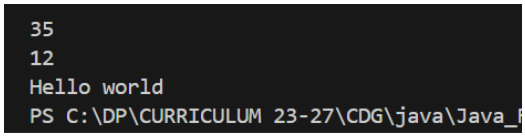
OUTPUT:



2.


```
public class Variable {
   public static void main(String[] args) {
      final int b = 12;
      int a=25;
      a+=10;
      //b+=5;
      String str= "Hello world";
      System.out.println(a);
      System.out.println(b);
      System.out.println(str);
   }
}
```

OUTPUT:



3.

```
public class Comments {
   public static void main(String[] args) {
      final int b = 12;
      int a=25;
      a+=10;

      //b+=5; This is a single line comment (final variable cannot be assigned a value)

      /* This is a
      multiline
      comment*/

      //comments will not be executed

      String str= "Hello world";
      System.out.println(a);
      System.out.println(b);
      System.out.println(str);
   }
}
```


OUTPUT:

```
35
12
Hello world
PS C:\DP\CURRICULUM 23-27\CDG\java\Java_Fal
```

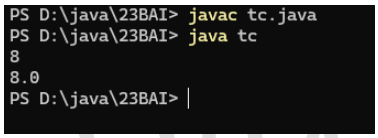
TypeCasting

1.Widening

CODE:

```
public class tc{

public static void main(String[] args){

int myInt= 8;

double myDouble=myInt;

System.out.println(myInt);

System.out.println(myDouble);

}

}
```

OUTPUT:

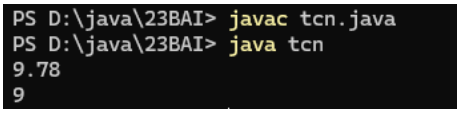


2.Narrowing

CODE:

```
public class tcn{

public static void main(String[] args){

double myDouble=9.78d;

int myInt=(int) myDouble;

System.out.println(myDouble);

System.out.println(myInt);

} }
```

OUTPUT:



Operators

2.Sum

```
public class operators{

public static void main(String[] args){

int sum1= 150;

string str1= "check";

int sum2 =sum1 +150;

int sum3= sum1+sum2;

int sample = sum1 + str1;

string sample2 = sum1 + str1;

string sample3 = "new " +str1;

System.out.println(sum2);

System.out.println(sum3);

System.out.println(sample);

System.out.println(sample2);

System.out.println(sample3);

}

}
```


OUTPUT:

```
PS D:\java\23BAI> javac operators.java
operators.java:7: error: incompatible types: String cannot be converted to int
int sample = sum1 + str1;
                    ^
```

```
PS D:\java\23BAI> javac operators.java
PS D:\java\23BAI> java operators
300
450
150check
new check
PS D:\java\23BAI>
```

4.Ternary operator:

```
public class TernaryOp{

public static void main(String args[]){

int x,y;

x=20;

y=(x==1)?48:81;

System.out.println("Value of y is "+y);

y=(x==20)?48:81;

System.out.println("Value of y is: "+y);

}

}
```

OUTPUT:

```
PS D:\java\23BAI> javac TernaryOp.java
PS D:\java\23BAI> java TernaryOp
Value of y is 81
Value of y is: 48
PS D:\java\23BAI>
```


5.Strings

```
public class str{

public static void main(String[] args){

String txt= "ABCDEFGHIJKLMNOPQRSTUVWXYZ";

System.out.println("The length of the text string is: "+ txt.length());

}}
```

OUTPUT:

```
PS D:\java\23BAI> javac str.java
PS D:\java\23BAI> java str
The length of the text string is: 26
PS D:\java\23BAI>
```

6.

```
public class Case{

public static void main(String[] args){

String word="Hello World";

System.out.println(word.toUpperCase());

System.out.println(word.toLowerCase());

}}
```

OUTPUT:

```
PS D:\java\23BAI> javac Case.java
PS D:\java\23BAI> java Case
HELLO WORLD
hello world
PS D:\java\23BAI>
```

7.


```
public class Locate{

public static void main(String[] args){

String test="Please locate where 'locate' occurs!";

System.out.println(test.indexOf("locate"));

}}
```

OUTPUT:

```
PS D:\java\23BAI> javac Locate.java
PS D:\java\23BAI> java Locate
7
PS D:\java\23BAI>
```

1. **Concatenation**

```
public class concat{
   public static void main(String args[]){
      String Fname = "Naveen";
      String Sname = "B S";
      System.out.println(Fname + " " + Sname);

   }
}
```

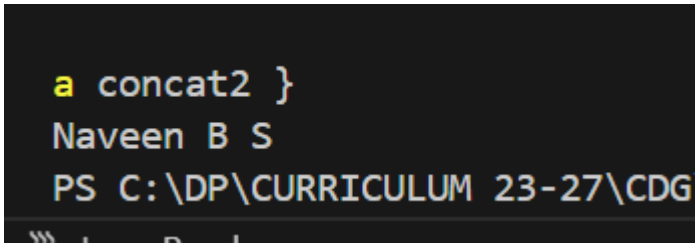
Output:

```
PS C:\DP\CURRICULUM 23-27\CDG\java> cd "c:\DP\CURRICULUM 23-27\CDG\java\Java_Fall\Java_Fall_24-25\220
Naveen B S
PS C:\DP\CURRICULUM 23-27\CDG\java\Java_Fall\Java_Fall_24-25\220724>
```

2. **Concatenation method**


```
public class concat2 {

    public static void main(String args[]){
       String Fname = "Naveen";
       String Sname = " B S";
       System.out.println(Fname.concat(Sname));

    }
}
```

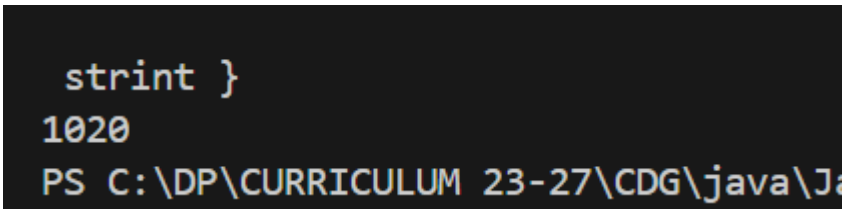
Output:



3.

```
public class strint {
   public static void main(String[] args){
      String x= "10";
      int y = 20;
      String z = x+y;
      System.out.println(z);
   }

}
```

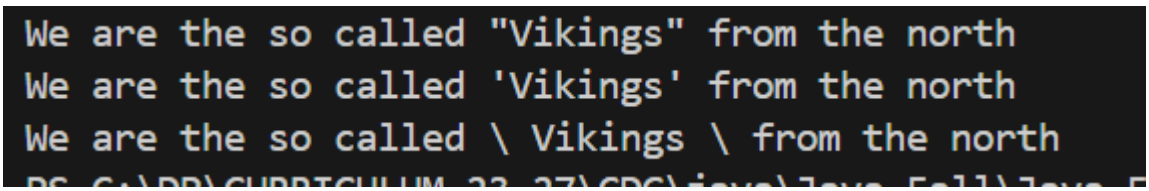
Output:



4.

```
public class Specialchar {
   public static void main(String[] args){
      String txt1= "We are the so called \"Vikings\" from the north ";
      String txt2 = "We are the so called \'Vikings\' from the north";
      String txt3= "We are the so called \\ Vikings \\ from the north";
      System.out.println(txt1);
      System.out.println(txt2);
      System.out.println(txt3);
   }

}
```

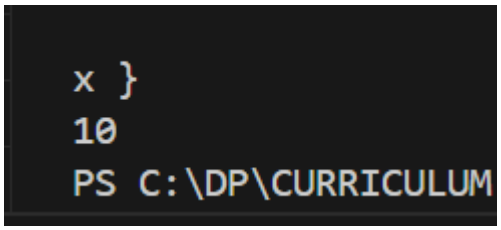
OUTPUT:



5.

```
public class max {
   public static void main(String[] args){
      System.out.println(Math.max(5,10));
   }
}
```

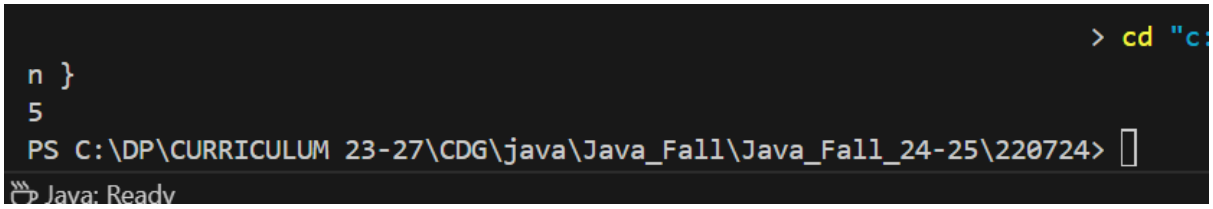
OUTPUT:



6.

```
public class min {
   public static void main(String[] args){
      System.out.println(Math.min(5,10));
   }
}
```

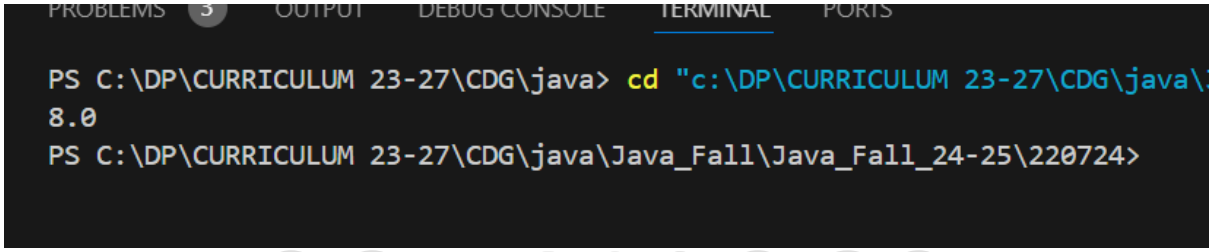
OUTPUT:



7.

```
public class sqrt {
   public static void main(String[] args) {
      System.out.println(Math.sqrt(64));
   }

}
```

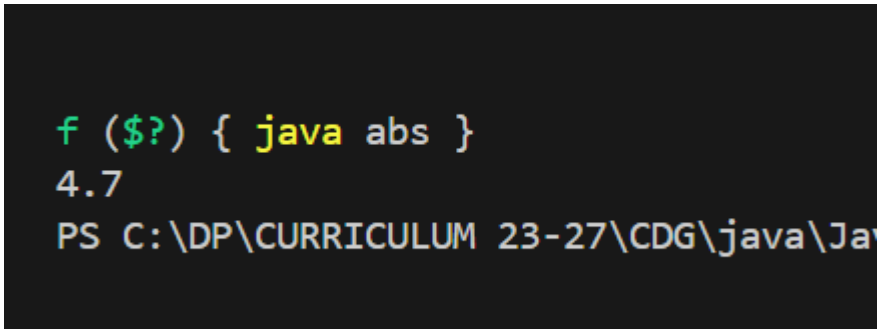
OUTPUT:



8.

```
public class abs {
   public static void main(String[] args) {
      System.out.println(Math.abs(-4.7));
   }

}
```

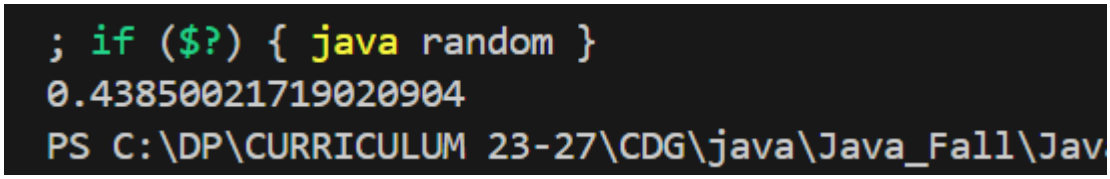
OUTPUT:



9.

```
public class random {
   public static void main(String[] args) {
      System.out.println(Math.random());
   }
}
```

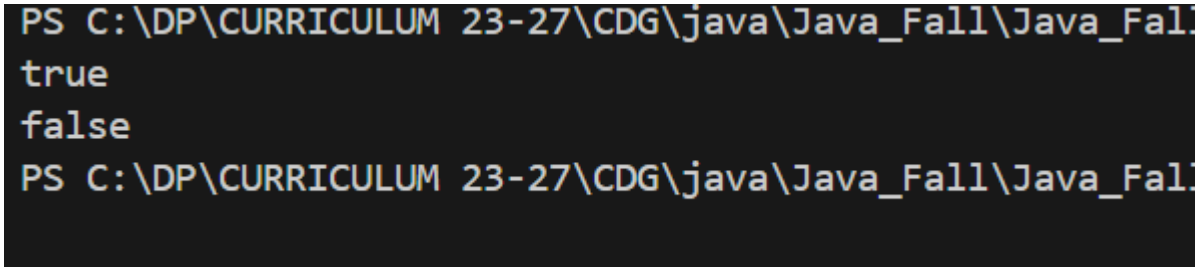
OUTPUT:



1.

```
public class bool{
   public static void main(String[] args){
      boolean isJavafun = true;
      boolean isFishTasty = false;
      System.out.println(isJavafun);
      System.out.println(isFishTasty);
   }
}
```

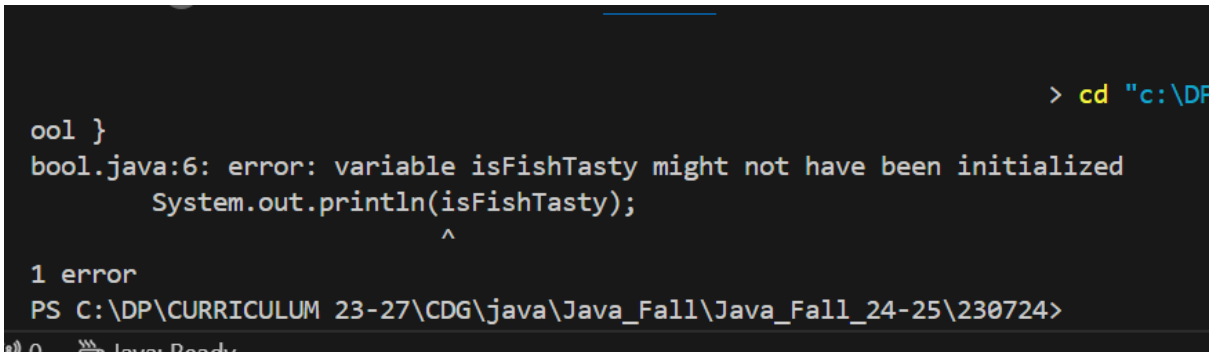
OUTPUT:



2.

```
public class bool{
   public static void main(String[] args){
      boolean isJavafun = true;
      boolean isFishTasty;
      System.out.println(isJavafun);
      System.out.println(isFishTasty);
   }
}
```

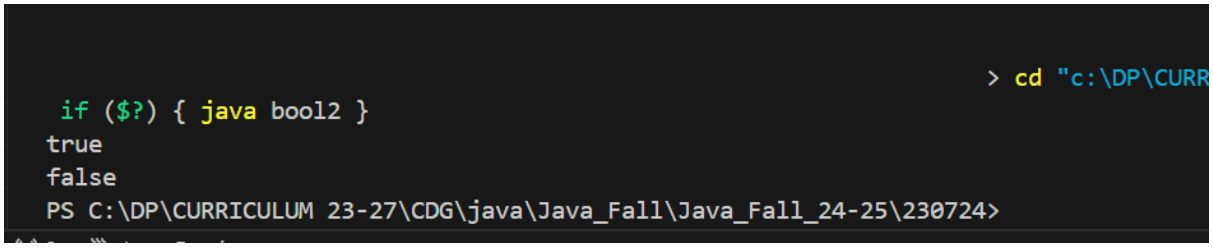
OUTPUT:



3.

```
public class bool2 {
   public static void main(String[] args){
      int x =10;
      int y=9;
      System.out.println(x>y);
      System.out.println(10==9);
   }

}
```

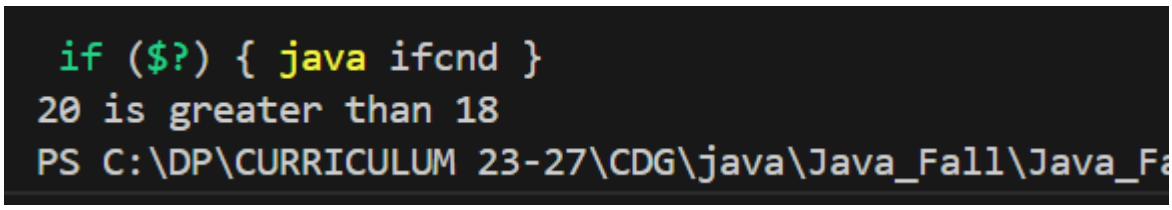
OUTPUT:



4.

```
public class ifcnd {
  public static void main( String[] args){
   if(20>18){
      System.out.println("20 is greater than 18");
   }
  }
}
```

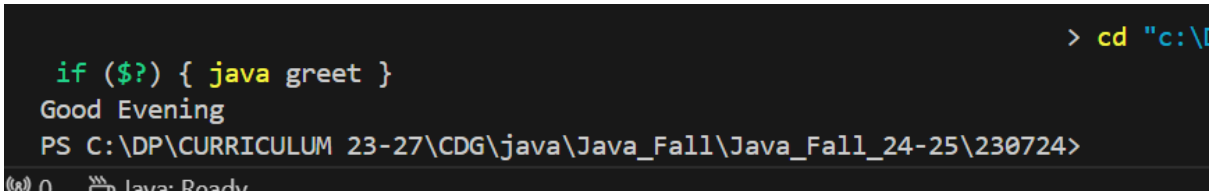
OUTPUT:



5.

```
public class greet{
   public static void main(String[] args){
      int time = 20;
      if(time<18){
         System.out.println("Good Day.");
      }
      else{
         System.out.println("Good Evening");
      }
   }
}
```

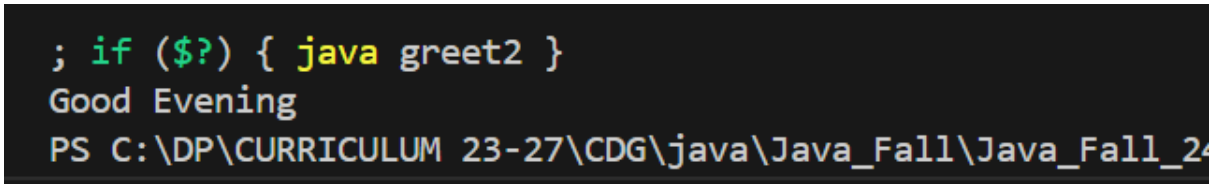
OUTPUT:



6.

```
public class greet2{
   public static void main(String[] args) {
      int time =22;
      if(time<10)
      {
         System.out.println("Good Morning");
      }
      else if (time<20){
         System.out.println("Good day");
      }
      else{
         System.out.println("Good Evening");
      }
   }
}
```

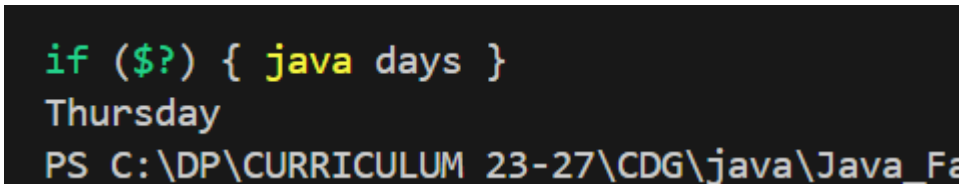
OUTPUT:



7.

```
public class days {
   public static void main(String[] args) {
      int day = 4;
      switch(day){
         case 1:
         System.out.println("Monday");
         break;
         case 2:
         System.out.println("Tuesday");
         break;
         case 3:
         System.out.println("Wednesday");
         break;
         case 4:
         System.out.println("Thursday");
         break;
         case 5:
         System.out.println("Friday");
         break;
         case 6:
         System.out.println("Saturday");
         break;
         case 7:
         System.out.println("Sunday");
         break;
         default:
         System.out.println("Good Day");
      }
   }
```

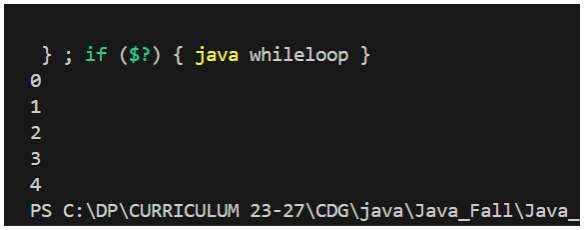
OUTPUT:



8.

```
public class whileloop {
   public static void main(String[] args) {
      int i=0;
      while(i<5){
         System.out.println(i);
         i++;

      }
   }

}
```

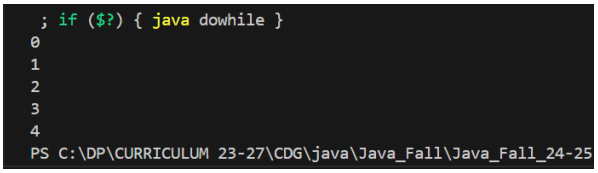
OUTPUT:



9.

```
public class dowhile {
   public static void main(String[] args) {
      int i = 0;
      do{
         System.out.println(i);
         i++;
      }
      while(i<5);
 }
}
```

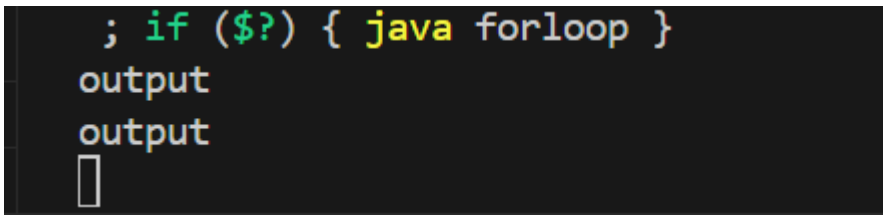
OUTPUT:



10.

```
public class forloop {
   public static void main(String[] args) {
      int i =0;
      for(;;){
         if(i<2){
            System.out.println("output");
         i++;
      }


      }
   }
}
```

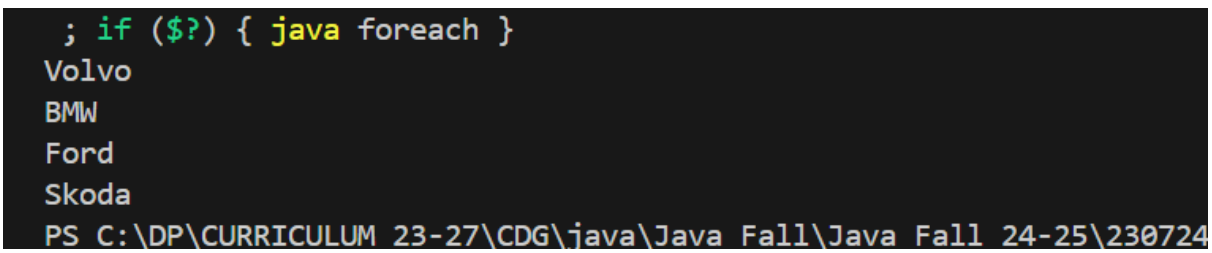
OUTPUT:



11.

```
public class foreach {
   public static void main(String[] args) {
      String[] cars = {"Volvo", "BMW", "Ford", "Skoda"};
      for(String i: cars){
         System.out.println(i);
      }
   }
}
```

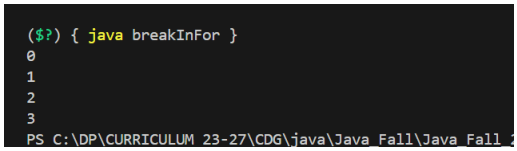
OUTPUT:



12.

```
public class breakInFor {
   public static void main(String[] args) {
      for(int i=0; i<10;i++){
         if(i==4){
         break;}
         System.out.println(i);
      }
   }
}
```

OUTPUT:



13.

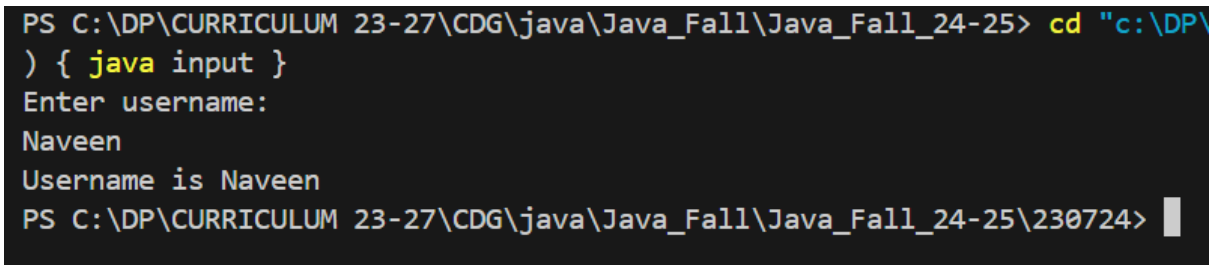
```
public class Forcontinue {
   public static void main(String[] args) {
      for(int i=0;i<10;i++){
         if(i==4)
         continue;
         System.out.println(i);
      }
   }
}
```

OUTPUT:

14.

```
import java.util.Scanner;
public class input {
   public static void main(String[] args) {
      Scanner myObj= new Scanner(System.in);
      String userName;
      System.out.println("Enter username: ");
      userName=myObj.nextLine();
      System.out.println("Username is "+ userName);
   }

}
```

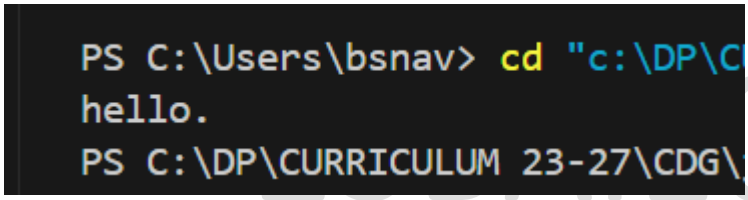
OUTPUT:



1.

```
public class chararray{
   public static void main(String[]  ags){


      char[] helloArray = {'h','e','l','l','o','.'};
      String helloString = new String(helloArray);
      System.out.println(helloString);

   }
}
```

OUTPUT:



2. CALCULATOR

```
import java.util.Scanner;
   public class Calculator {
      public static void main(String[] args){
  Scanner myObj = new Scanner(System.in);


  String q;
  do{
   System.out.println("Choose an option: \n 1-Addition\n 2-Subtraction\n 3-Mutliplication\n 4-
Division\n 5-modulus\n 6-exponential\n");
   int choice= myObj.nextInt();
     switch(choice){
        case 1:
           System.out.println("Enter numbers to add: ");
           float num1= myObj.nextInt();
           float num2= myObj.nextInt();
           float sum= num1 + num2;
           System.out.printf("%.2f\n",sum);
           break;


        case 2:
           System.out.println("Enter numbers to Subtract: ");
           float sub1= myObj.nextInt();
           float sub2= myObj.nextInt();
           float diff= sub1 - sub2;
           System.out.printf("%.2f\n",diff);
           break;


        case 3:
           System.out.println("Enter numbers to Multiply: ");
```

```
    float m1= myObj.nextInt();
    float m2= myObj.nextInt();
    float prod= m1 * m2;
    System.out.printf("%.2f\n",prod );
    break;
case 4:
    System.out.println("Enter numbers to divide as dividend and divisor: ");
    float d1= myObj.nextFloat();
    float d2= myObj.nextFloat();
    if(d2==0){
       System.out.printf("Invalid number, retry");
       break;
    }
    else{
    float quo= d1/d2;
    System.out.printf("%.2f\n",quo );
    break;}
case 5:
    System.out.println("Enter number to get the absolute value: ");
    float a= myObj.nextFloat();
    float ans = Math.abs(a);
    System.out.printf("%.2f",ans);
    break;
case 6:
    System.out.println("Enter the exponential number x^y in the form of x and y: ");
    int p1= myObj.nextInt();
    int p2= myObj.nextInt();
    double expn = Math.pow(p1, p2);
    System.out.printf("%.2f", expn);
    break;
default:
```

```
            System.out.println("Invalid choice");
            break;


      }System.out.println("Do you want to try something else? (y/n)");
      q = myObj.next();
      myObj.nextLine();
    }
   while(q.equals("y"));


}
}
```

OUTPUT:

```
ulator }
Choose an option:
 1-Addition
 2-Subtraction
 3-Mutliplication
 4-Division
 5-modulus
 6-exponential

1
Enter numbers to add:
345
666
1011.00
Do you want to try something else? (y/n)
y
Choose an option:
 1-Addition
 2-Subtraction
 3-Mutliplication
 4-Division
 5-modulus
 6-exponential

2
Enter numbers to Subtract:
345
12
333.00
Do you want to try something else? (y/n)
y
Choose an option:
 1-Addition
 2-Subtraction
 3-Mutliplication
 4-Division
 5-modulus
 6-exponential
```

```
 6-exponential

123
Invalid choice
Do you want to try something else? (y/n)
y
Choose an option:
 1-Addition
 2-Subtraction
 3-Mutliplication
 4-Division
 5-modulus
 6-exponential

3
Enter numbers to Multiply:
123
456
56088.00
Do you want to try something else? (y/n)
y
Choose an option:
 1-Addition
 2-Subtraction
 3-Mutliplication
 4-Division
 5-modulus
 6-exponential

4
Enter numbers to divide as dividend and divisor:
468
4
117.00
Do you want to try something else? (y/n)
y
Choose an option:
 1-Addition
 2-Subtraction
 3-Mutliplication
 4-Division
```

```
 4-Division
 5-modulus
 6-exponential

5
Enter number to get the absolute value:
-98
98.00
Do you want to try something else? (y/n)
y
Choose an option:
 1-Addition
 2-Subtraction
 3-Mutliplication
 4-Division
 5-modulus
 6-exponential

6
Enter the exponential number x^y in the form of x and y:
2
3
8.00
Do you want to try something else? (y/n)
n
PS C:\DP\CURRICULUM 23-27\CDG\java\Java_Fall\Java_Fall_24-
```