




PROGRAMMING FUNDAMENTALS WEEK – 01 ASSIGNMENT



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ICM 106 OR23106564

01.

```
class Example{  
    public static void main (String args[]){  
        System.out.println("institute of computer engineering Technology");  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\01>java Example
institute of computer engineering Technology

02.

```
class Example{  
    public static void main(String args[]){  
        System.out.println("Institute of computer Engineering Technology");  
        System.out.println("223 A,");  
        System.out.println("Galle Road,");  
        System.out.println("Panadura");  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\02>java Example
Institute of computer Engineering Technology
223 A,
Galle Road,
Panadura

03.

```
class Example{  
    public static void main(String args[]){  
        System.out.println("J");  
        System.out.println("A");  
        System.out.println("V");  
        System.out.println("A");  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\03>java Example

J
A
V
A

04.

```
class Example{  
    public static void main(String args[]){  
        System.out.println("I");  
        System.out.println(1000);  
        System.out.println(1.23);  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\04>java Example

I
1000
1.23

05.

```
class Example{  
    public static void main (String args[]){  
        System.out.println("Hello");  
        System.out.println("A");  
        System.out.println(1234);  
        System.out.println(-1234);  
        System.out.println(1.2334);  
        System.out.println(0.0032);  
        System.out.println(-0.0023);  
        System.out.println('A');  
        System.out.println('6');  
        System.out.println(true);  
        System.out.println(false);  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\05>java Example

Hello

A

1234

-1234

1.2334

0.0032

-0.0023

A

6

true

false

06.

```
class Example{  
    public static void main(String args[]){  
        System.out.println("A");  
        System.out.println("B");  
        System.out.println("C");  
        System.out.println("D");  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\06>java Example

A

B

C

D

07.

```
class Example{  
    public static void main (String args[]){  
        System.out.println("1");  
        System.out.println("2");  
        System.out.println("3");  
        System.out.println("4");  
        System.out.println("5");  
        System.out.println("6");  
        System.out.println("7");  
        System.out.println("8");  
        System.out.println("9");  
        System.out.println("10");  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\07>java Example

1
2
3
4
5
6
7
8
9
10

08.

```
class Example{  
    public static void main(String args[]){  
        System.out.println("1");  
        System.out.println();  
        System.out.println("2");  
        System.out.println("3");  
        System.out.println();  
        System.out.println("4");  
        System.out.println("5");  
        System.out.println("6");  
        System.out.println();  
        System.out.println("7");  
        System.out.println("8");  
        System.out.println("9");  
        System.out.println("10");  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\08>java Example

1

2

3

4

5

6

7

8

9

10

09.

```
class Example{  
    public static void main(String args[]){  
        System.out.println("A");  
        System.out.println("B");  
        System.out.println();  
        System.out.println("C");  
        System.out.println("D");  
        System.out.println(" ");  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\09>java Example

A

B

C

D

10.

```
class Example{  
    public static void main( String args[]){  
        System.out.println("A");  
        System.out.println("B");  
        System.out.println();  
        System.out.println("C");  
        System.out.println("D");  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\10>java Example

A

B

C

D

11.

```
class Example{  
    public static void main(String args[]){  
        int a;  
        a=100;  
        System.out.println("a");  
        System.out.println(a);  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\11>java Example

a

100

12.

```
class Example{  
    public static void main (String args[]){  
        int a;  
        a=100;  
        System.out.println("a");  
        System.out.println(a);  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\12>javac Example.java

Example.java:5: error: variable a might not have been initialized

```
        System.out.println(a);  
                        ^
```

1 error

13.

```
class Example{  
    public static void main(String args[]){  
        int a= 100;  
        System.out.println(a);  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\13>java Example

100

14.

```
class Example{  
    public static void main(String args[]){  
        int a;  
        System.out.println(a);  
        a=100;  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\14>javac Example.java

Example.java:4: error: variable a might not have been initialized

```
    System.out.println(a);  
                        ^
```

1 error

15.

```
class Example{  
    public static void main(String args[]){  
        int x;  
        x=100;  
        x=200;  
        System.out.println(x);  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\15>java Example

200

16.

```
class Example{  
    public static void main(String args[]){  
        int x;  
        x=100;  
        System.out.println(x);  
        x=200;  
        System.out.println(x);  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\16>java Example

100

200

17.

```
class Example{  
    public static void main(String args[]){  
        int x=100;  
        int y=200;  
        System.out.println(x);  
        System.out.println(y);  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\17>java Example

100

200

18.

```
class Example{  
    public static void main(String args[]){  
        int x;  
        x=1000;  
        System.out.println(x);  
        var y=2000;  
        System.out.println(y);  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\18>java Example

1000

2000

19.

```
class Example{  
    public static void main(String args[]){  
        int x=100;  
        int y=200;  
        int z;  
        System.out.println(x);  
        System.out.println(y);  
        System.out.println(z);  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\19>javac Example.java

Example.java:8: error: variable z might not have been initialized

```
        System.out.println(z);
```

^

1 error

20.

```
class Example{  
    public static void main(String args[]){  
        int x=100,y,z=200;  
        System.out.println(x);  
        y="java";  
        System.out.println(y);  
        System.out.println(z);  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\20>javac Example.java

Example.java:5: error: incompatible types: String cannot be converted to int

```
        y="java";  
        ^
```

1 error

21.

```
class Example{  
    public static void main(String args[]){  
        System.out.println("A");  
        //System.out.println("B");  
        System.out.println("C");  
        //System.out.println("D");  
        System.out.println("E");  
    }  
}
```

K:\projects\MY_PROJECTS\ICM106\Programming Fundamentals\Assignment 01\21>java Example

A

C

E

22.

```
class Example{  
    public static void main(String args[]){  
        System.out.println("A");  
        System.out.println("B");  
        /*System.out.println("C");  
        System.out.println("D");  
        System.out.println("E");*/  
        System.out.println("F");  
    }  
}
```

K:\projects\MY_PROJECTS\ICM106\Programming Fundamentals\Assignment 01\22>java Example

A

B

F

23.

```
class Example{  
    public static void main(String args[]){  
        int x=100;  
        int y=200;  
        System.out.println(x);  
        System.out.println(y);  
        x=y;  
        System.out.println(x);  
        System.out.println(y);  
    }  
}
```

K:\projects\MY_PROJECTS\ICM106\Programming Fundamentals\Assignment 01\23>java Example

100

200

200

200

24.

```
class Example{
```

```
        public static void main(String args[]){  
            System.out.println(true);  
            System.out.println("true");  
        }  
    }
```

K:\projects\MY_PROJECTS\ICM106\Programming Fundamentals\Assignment 01\24>java Example

true

true

25.

```
class Example{  
    public static void main(String args[]){  
        System.out.println(Java);  
        System.out.println("Java");  
    }  
}
```

K:\projects\MY_PROJECTS\ICM106\Programming Fundamentals\Assignment 01\25>javac
Example.java

Example.java:3: error: cannot find symbol

```
        System.out.println(Java);
```

^

symbol: variable Java

location: class Example

1 error

26.

```
class Example{  
    public static void main(String args[]){  
        System.out.println('A');  
        System.out.println("A");  
        System.out.println('2');  
        System.out.println("2");  
        System.out.println('JAVA');  
        System.out.println("JAVA");  
    }  
}
```

K:\projects\MY_PROJECTS\ICM106\Programming Fundamentals\Assignment 01\26>javac
Example.java

Example.java:7: error: unclosed character literal

```
    System.out.println('JAVA');  
                        ^
```

Example.java:7: error: unclosed character literal

```
    System.out.println('JAVA');  
                        ^
```

Example.java:7: error: not a statement

```
    System.out.println('JAVA');  
                        ^
```

3 errors

```
class Example{  
    public static void main(String args[]){  
        System.out.println("Hellooooo\tJAVA");  
        System.out.println("Hellooooo\t\t\t\t\tJAVA");  
    }  
}
```

Helloooooo JAVA

```
class Example{  
    public static void main(String args[]){  
        System.out.println("Hi\tJAVA");  
        System.out.println("Hello\tWorld");  
    }  
}
```

Hello World

29.

```
class Example{  
    public static void main(String args[]){  
        System.out.println("AB\nCD");  
        System.out.println("");  
        System.out.println("EF\tGH\n\nIJ\tKL");  
    }  
}
```

K:\projects\MY_PROJECTS\ICM106\Programming Fundamentals\Assignment 01\29>java Example

AB

CD

EF GH

IJ KL

30.

```
class Example{  
    public static void main(String args[]){  
        System.out.println("time-"17:56:02");  
    }  
}
```

K:\projects\MY_PROJECTS\ICM106\Programming Fundamentals\Assignment 01\30>javac

Example.java

Example.java:3: error: ')' expected

```
        System.out.println("time-"17:56:02");
```

^

1 error

31.

```
class Example{  
    public static void main(String args[]){  
        System.out.println("\'iCET\'");  
        System.out.println("\"Insitute of Computer Engineering Technology\"");  
    }  
}
```

```
K:\projects\MY_PROJECTS\ICM106\Programming Fundamentals\Assignment 01\31>java Example  
'iCET'  
"Insitute of Computer Engineering Technology"
```

32.

```
class Example{  
    public static void main(String args[]){  
        System.out.println("First Line\nSecond Line");  
        System.out.println("A\tB\tC");  
        System.out.println("D\tE\tF");  
    }  
}
```

```
K:\projects\MY_PROJECTS\ICM106\Programming Fundamentals\Assignment 01\32>java Example  
First Line  
Second Line  
A   B   C  
D   E   F
```

33.

```
class Example{  
    public static void main(String args[]){  
        System.out.println("AB\nCD");  
        System.out.println("AB\tCD");  
        System.out.println("AB\fCD");  
        System.out.println("AB\bCD");  
        System.out.println("AB\rCD");  
        System.out.println("AB\\CD");  
    }  
}
```

K:\projects\MY_PROJECTS\ICM106\Programming Fundamentals\Assignment 01\33>java Example

AB

CD

AB CD

AB♀CD

ACD

CD

AB\CD

34.

```
class Example{  
    public static void main(String args[]){  
        System.out.println(10+20);  
        System.out.println("10"+"20");  
        System.out.println("10"+20);  
        System.out.println(10+"20");  
    }  
}
```

K:\projects\MY_PROJECTS\ICM106\Programming Fundamentals\Assignment 01\34>java Example

30

1020

1020

1020

35.

```
class Example{  
    public static void main(String args[]){  
        System.out.println(20230326);  
        System.out.println("2023-03-26");  
    }  
}
```

K:\projects\MY_PROJECTS\ICM106\Programming Fundamentals\Assignment 01\35>java Example

20230326

2023-03-26

36.

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

K:\projects\MY_PROJECTS\ICM106\Programming Fundamentals\Assignment 01\36>java Example
10+20=30

37.

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

E:\dev\ICM106\Programming Fundamentals\Assignment 01\37>java Example

30

xy

x+y

x20

10y

38.

```
class Example{  
    public static void main(String args[]){  
        System.out.println(10+20+30);  
        System.out.println("10+20+30");  
        System.out.println(10+20+30);  
        System.out.println("10+20"+30);  
        System.out.println("10"+"20"+"30");  
        System.out.println("10"+20+30);  
        System.out.println(10+20+"30");  
        System.out.println(10+"20"+30);  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\38>java Example

60

10+20+30

60

10+2030

102030

102030

3030

102030

39.

```
class Example{  
    public static void main(String args[]){  
        String s1="Hello";  
        System.out.println(s1);  
        System.out.println(s1.concat(" JAVA"));  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\39>java Example

Hello

Hello JAVA

40.

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

E:\dev\ICM106\Programming Fundamentals\Assignment 01\40>java Example

10+20=30

10-20=-10

10*20=200

41.

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

E:\dev\ICM106\Programming Fundamentals\Assignment 01\41>java Example

10+20=30

10-20=-10

10*20=200

42.

```
class Example{  
    public static void main(String args[]){  
        int x,y;  
        x=100;  
        y=200;  
        System.out.println(x);  
        System.out.println(y);  
  
        y=x;  
        System.out.print(x);  
        System.out.print(y);  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\42>java Example

100

200

100100

43.

```
class Example{  
    public static void main(String args[]){  
        int num=103;  
        if(num>0){  
            System.out.println(num+" is positive number");  
        }else if(num<0){  
            System.out.println(num+" is negative number");  
        }else{  
            System.out.println(num+" is 0");  
        }  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\43>java Example

103 is positive number

44.

```
import java.util.*;

class Example{

    public static void main(String args[]){

        Scanner input=new Scanner(System.in);

        System.out.print("Input number - ");

        int num=input.nextInt();

        if(num>0){

            System.out.println(num+" is positive number");

        }else if(num<0){

            System.out.println(num+" is negative number");

        }else{

            System.out.println(num+" is 0");

        }

    }

}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\44>java Example

Input number - 50

50 is positive number

E:\dev\ICM106\Programming Fundamentals\Assignment 01\44>java Example

Input number - 0

0 is 0

E:\dev\ICM106\Programming Fundamentals\Assignment 01\44>java Example

Input number - -15

-15 is negative number

45.

```
import java.util.*;

class Example{

    public static void main(String args[]){

        Scanner input=new Scanner(System.in);

        System.out.print("Enter your marks -");

        int mark=input.nextInt();

        if(mark>=75){

            System.out.println("your grade is A");

        }else if(mark>=65){

            System.out.println("your grade is B");

        }else if(mark>=50){

            System.out.println("your grade is C");

        }else{

            System.out.println("your grade is F");

        }

    }

}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\45>java Example

Enter your marks -95

your grade is A

E:\dev\ICM106\Programming Fundamentals\Assignment 01\45>java Example

Enter your marks -68

your grade is B

E:\dev\ICM106\Programming Fundamentals\Assignment 01\45>java Example

Enter your marks -55

your grade is C

E:\dev\ICM106\Programming Fundamentals\Assignment 01\45>java Example

Enter your marks -43

your grade is F

46.

```
import java.util.*;

class Example{

    public static void main(String args[]){

        Scanner input=new Scanner(System.in);

        System.out.print("Enter your age - ");

        int age=input.nextInt();

        if(age<18){

            System.out.println("age is not valid to vote");

        }else{

            System.out.println("Welcome to vote");

        }

    }

}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\46>java Example

Enter your age - 25

Welcome to vote

E:\dev\ICM106\Programming Fundamentals\Assignment 01\46>java Example

Enter your age - 15

age is not valid to vote

47.

```
class Example{  
    public static void main(String args[]){  
        double x,y,z;  
        x=3;  
        y=4;  
        z=Math.sqrt(x*x+y*y);  
        System.out.println("Hypotenuse is "+z);  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\47>java Example
Hypotenuse is 5.0

48.

```
import java.util.*;  
class Example{  
    public static void main(String args[]){  
        Scanner input= new Scanner(System.in);  
        System.out.println("Enter any number - ");  
        int num=input.nextInt();  
        int fact=1;  
        for(int i=1;i<num;i++){  
            fact=fact*i;  
        }  
        System.out.println("the factorial of "+num+" is "+fact);  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\48>java Example
Enter any number -
5
the factorial of 5 is 24

49.

```
import java.util.*;
```

```
class Example{
```

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

```
        Scanner input=new Scanner(System.in);
```

```
        System.out.println("input your age -");
```

```
        int age=input.nextInt();
```

```
        if(age<18){
```

```
            System.out.println("age is not valid to vote");
```

```
        }
```

```
        else{
```

```
            System.out.println("welcome to vote");
```

```
        }
```

```
    }
```

```
}
```

```
E:\dev\ICM106\Programming Fundamentals\Assignment 01\49>java Example
```

```
input your age -
```

```
15
```

```
age is not valid to vote
```

```
E:\dev\ICM106\Programming Fundamentals\Assignment 01\49>java Example
```

```
input your age -
```

```
25
```

```
welcome to vote
```


50.

```
class Example{  
    public static void main(String args[]){  
        for(int i=-5;i<6;i++){  
            int result = i!=0?100/i:0;  
            if(i!=0){  
                System.out.println("100/"+i+" is "+result);  
            }  
        }  
    }  
}
```

E:\dev\ICM106\Programming Fundamentals\Assignment 01\50>java Example

100/-5 is -20

100/-4 is -25

100/-3 is -33

100/-2 is -50

100/-1 is -100

100/1 is 100

100/2 is 50

100/3 is 33

100/4 is 25

100/5 is 20