WEEK 2 – OOJ LAB PROGRAMS

LAB-1:

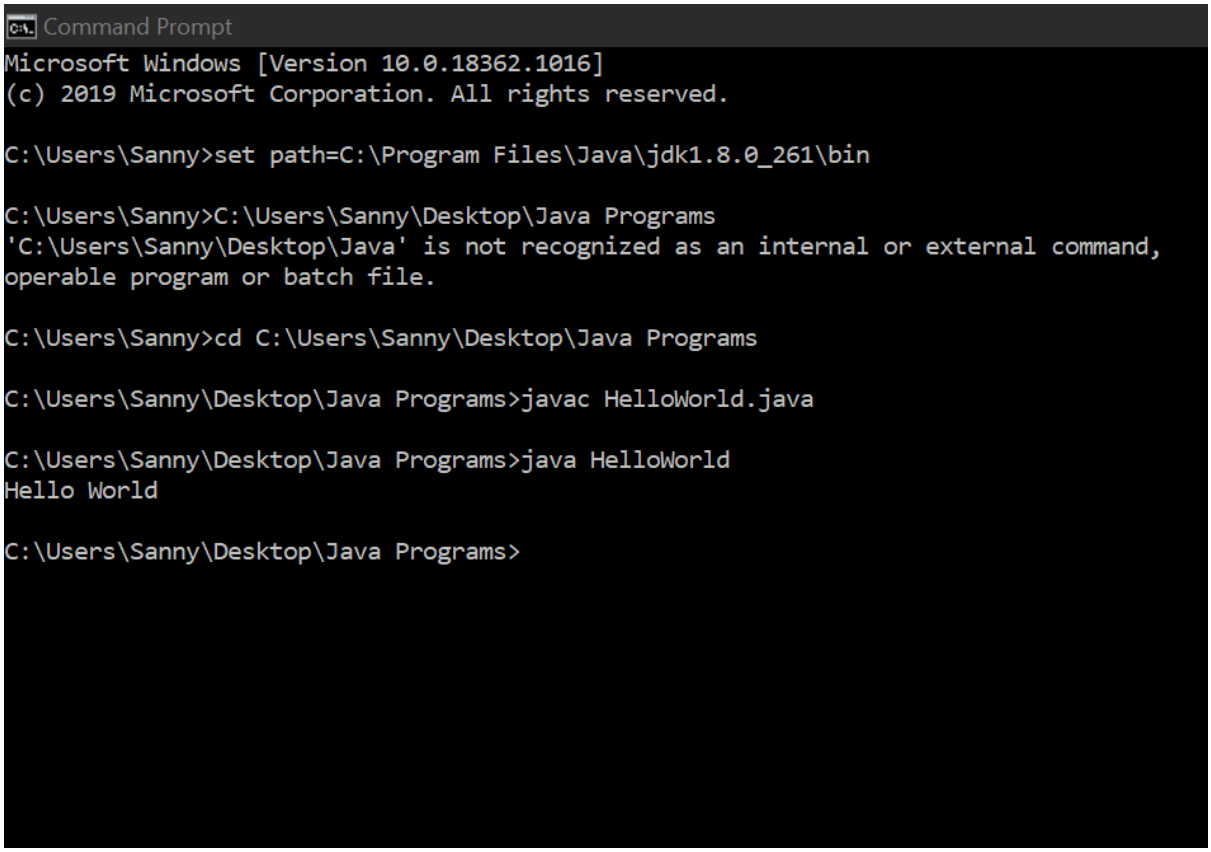
HelloWorld - Notepad

File Edit Format View Help

```
//Java Program to print "Hello World"

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

Output:


Command Prompt
Microsoft Windows [Version 10.0.18362.1016]
(c) 2019 Microsoft Corporation. All rights reserved.
C:\Users\Sanny>set path=C:\Program Files\Java\jdk1.8.0_261\bin
C:\Users\Sanny>C:\Users\Sanny\Desktop\Java Programs
'C:\Users\Sanny\Desktop\Java' is not recognized as an internal or external command,
operable program or batch file.
C:\Users\Sanny>cd C:\Users\Sanny\Desktop\Java Programs
C:\Users\Sanny\Desktop\Java Programs>javac HelloWorld.java
C:\Users\Sanny\Desktop\Java Programs>java HelloWorld
Hello World
C:\Users\Sanny\Desktop\Java Programs>

LAB-2:

*LargestofThreeNumbers - Notepad

File Edit Format View Help

```
//Java Program to find largest of three numbers using if construct

class LargestofThreeNumbers{
public static void main(String args[]){
int num1=3,num2=4,num3=5;
if(num1>num2&&num1>num3)
System.out.println("Largest of the three numbers:"+num1);
else if(num2>num1&&num2>num3)
System.out.println("Largest of the three numbers:"+num2);
else
System.out.println("Largest of the three numbers:"+num3);
}
}
```

Output:

```
C:\Users\Sanny\Desktop\Java Programs>javac LargestofThreeNumbers.java

C:\Users\Sanny\Desktop\Java Programs>java  LargestofThreeNumbers
Largest of the three numbers:5

C:\Users\Sanny\Desktop\Java Programs>
```

LAB-3:

UserInput - Notepad

File Edit Format View Help

```
//Java Program to input numbers from 1 to n from the user

import java.util.*;
class UserInput{
public static void main(String args[]){
Scanner in=new Scanner(System.in);
int n;
System.out.println("Enter value of 'n':");
n=in.nextInt();
for(int i=1;i<=n;i++){
System.out.println(i);
}
}
}
```

OUTPUT:

```
C:\Users\Sanny\Desktop\Java Programs>javac UserInput.java

C:\Users\Sanny\Desktop\Java Programs>java  UserInput
Enter value of 'n':
3
1
2
3

C:\Users\Sanny\Desktop\Java Programs>
```

LAB-4:

Pyramid - Notepad

File Edit Format View Help

```
import java.util.*;
class Pyramid{
public static void main(String args[]){
Scanner in=new Scanner(System.in);
int n,num=1;
System.out.println("Enter the number of rows:");
n=in.nextInt();
for(int i=1;i<=n;i++){
for(int j=1;j<=i;j++){
System.out.print(num+"\t");
num++;
}
System.out.print("\n");
}
}
}
```

OUTPUT:

Select Command Prompt

```
C:\Users\Sanny\Desktop\Java Programs>javac Pyramid.java

C:\Users\Sanny\Desktop\Java Programs>java  Pyramid
Enter the number of rows:
4
1
2       3
4       5       6
7       8       9       10

C:\Users\Sanny\Desktop\Java Programs>
```

LAB-5:

Grade - Notepad

File Edit Format View Help

```
//Java Program to print the grade of the student based on CIE (Out of 50) and SEE marks(Out of 100)

import java.util.*;
class Grade{
public static void main(String args[]){
Scanner in=new Scanner(System.in);
int cie,see,total=0;
char grade;
System.out.println("Enter the CIE marks (Out of 50)");
cie=in.nextInt();
System.out.println("Enter the SEE marks (Out of 100)");
see=in.nextInt();
total=(cie+(see/2));
if(total>=90&&total<=100)
System.out.println("S Grade");
else if(total>=80&&total<90)
System.out.println("A Grade");
else if(total>=70&&total<80)
System.out.println("B Grade");
else if(total>=60&&total<70)
System.out.println("C Grade");
else if(total>=50&&total<60)
System.out.println("D Grade");
else if(total>=40&&total<50)
System.out.println("E Grade");
else if(total<40)
System.out.println("F Grade");
else
System.out.println("Invalid Input!");
}
}
```

OUTPUT:

Command Prompt

```
C:\Users\Sanny\Desktop\Java Programs>javac Grade.java

C:\Users\Sanny\Desktop\Java Programs>java Grade
Enter the CIE marks (Out of 50)
50
Enter the SEE marks (Out of 100)
90
S Grade

C:\Users\Sanny\Desktop\Java Programs>
```

LAB-6:

PrimeNumber - Notepad

File Edit Format View Help

```
//Java Program to print all the prime numbers between two given numbers

import java.util.*;
class PrimeNumber {
public static void main(String[] args) {
Scanner in=new Scanner(System.in);
int num1,num2;
boolean flag;
System.out.println("Enter the first number:");
num1=in.nextInt();
System.out.println("Enter the second number:");
num2=in.nextInt();
for (int k = num1; k <= num2; k++) {
flag=true;
if (k < 2) {
flag = false;
}
else {
  for (int i = 2; i < k; i++) {
 if (k % i == 0) {
flag = false;
}
}
}
if (flag) {
System.out.println(k);
}
}
}
}
```

OUTPUT:

```
C:\Users\Sanny\Desktop\Java Programs>javac PrimeNumber.java

C:\Users\Sanny\Desktop\Java Programs>java PrimeNumber
Enter the first number:
5
Enter the second number:
10
5
7

C:\Users\Sanny\Desktop\Java Programs>
```

LAB-7:

Elective - Notepad

File Edit Format View Help

```
#include<stdio.h>
struct student
{
char name[20];
int ele;
};
int main()
{
struct student s[50];
int n,x,c1=0,c2=0,c3=0,n1=0,n2=0,n3=0;
printf("Enter the number of students:\n");
scanf("%d",&n);
printf("Enter the details:\n");
for(int i=0;i<n;i++)
{
printf("Student Name:");
scanf("%s",s[i].name);
printf("Elective Chosen:\n1.Internet of Things\n2.Advanced Java and J2EE\n3.Advanced Data Structures\n");
scanf("%d",&s[i].ele);
if(s[i].ele==1)
c1++;
else if(s[i].ele==2)
c2++;
else
c3++;
}

printf("Select:\n1.Internet of Things\n2.Advanced Java and J2EE\n3.Advanced Data Structures\n");
scanf("%d",&x);
printf("List of students who have chosen this elective course\n");
for(int i=0;i<n;i++)
{
if(s[i].ele==x)
printf("%s\n",s[i].name);
}
printf("\nNumber of students in:\n1.Internet of Things: %d\n2.Advanced Java and J2EE: %d\n3.Advanced Data Structures:%d\n",c1,c2,c3);
if(c1<3)
{
printf("Sorry! Elective Course: Internet of Things will not be floated.\n");
for(int i=0;i<n;i++)
{
if(s[i].ele==1)
{
printf("%s choose new elective\n2.Advanced Java and J2EE\n3.Advanced Data Structures\n",s[i].name);
scanf("%d",&s[i].ele);
}
}
}
if(c2<3)
{
printf("Sorry! Elective Course: Advanced Java and J2EE will not be floated.\n");
for(int i=0;i<n;i++)
{
if(s[i].ele==2)
{
printf("%s choose new elective\n1.Internet of Things\n3.Advanced Data Structures\n",s[i].name);
scanf("%d",&s[i].ele);
}
}
}
if(c3<3)
{
printf("Sorry! Elective Course: Advanced Data Structures will not be floated.\n");
for(int i=0;i<n;i++)
{
if(s[i].ele==3)
```

```
{
printf("%s choose new elective\n1.Internet of Things\n2.Advanced Java and J2EE\n",s[i].name);
scanf("%d",&s[i].ele);
}
}
}
for(int i=0;i<n;i++)
{
if(s[i].ele==1)
n1++;
else if(s[i].ele==2)
n2++;
else
n3++;
}
printf("\nNumber of students in:\n1.Internet of Things: %d\n2.Advanced Java and J2EE: %d\n3.Advanced Data Structures:%d\n",n1,n2,n3);

printf("\nNames of Students in Elective Course: Internet of Things\n");
for(int i=0;i<n;i++)
{
if(s[i].ele==1)
printf("%s\n",s[i].name);
}

printf("\nNames of Students in Elective Course: Advanced Java and J2EE\n");
for(int i=0;i<n;i++)
{
if(s[i].ele==2)
printf("%s\n",s[i].name);
}
printf("\nNames of Students in Elective Course: Advanced Data Structures\n");
for(int i=0;i<n;i++)
{
if(s[i].ele==3)
printf("%s\n",s[i].name);

}
}
```

OUTPUT:

```
Enter the number of students:
7
Enter the details:
Student Name:Sannidhi
Elective Chosen:
1.Internet of Things
2.Advanced Java and J2EE
3.Advanced Data Structures
2
Student Name:Sai
Elective Chosen:
1.Internet of Things
2.Advanced Java and J2EE
3.Advanced Data Structures
2
Student Name:Zeeshan
Elective Chosen:
1.Internet of Things
2.Advanced Java and J2EE
3.Advanced Data Structures
2
Student Name:Ajay
Elective Chosen:
1.Internet of Things
2.Advanced Java and J2EE
3.Advanced Data Structures
1
Student Name:Suraj
Elective Chosen:
```

```
1.Internet of Things
2.Advanced Java and J2EE
3.Advanced Data Structures
1
Student Name:Anna
Elective Chosen:
1.Internet of Things
2.Advanced Java and J2EE
3.Advanced Data Structures
1
Student Name:Pranav
Elective Chosen:
1.Internet of Things
2.Advanced Java and J2EE
3.Advanced Data Structures
3
Select:
1.Internet of Things
2.Advanced Java and J2EE
3.Advanced Data Structures
1
List of students who have chosen this elective course
Ajay
Suraj
Anna

Number of students in:
1.Internet of Things: 3
2.Advanced Java and J2EE: 3
```

```
2.Advanced Java and J2EE: 3
3.Advanced Data Structures:1
Sorry! Elective Course: Advanced Data Structures will not be floated.
Pranav choose new elective
1.Internet of Things
2.Advanced Java and J2EE
1

Number of students in:
1.Internet of Things: 4
2.Advanced Java and J2EE: 3
3.Advanced Data Structures:0

Names of Students in Elective Course: Internet of Things
Ajay
Suraj
Anna
Pranav

Names of Students in Elective Course: Advanced Java and J2EE
Sannidhi
Sai
Zeeshan

Names of Students in Elective Course: Advanced Data Structures
```