

Session 1

Assignment 1

1. Write a program to print the sum of two numbers without using + operator. Other operators can be used.

Program Code:

```
import java.util.Scanner;
class Sum{
public static void main(String[] arg)
{
int x,y;
Scanner input = new Scanner(System.in);
System.out.println("Enter your first number:");
x = input.nextInt();
System.out.println("Enter your second number:");
y = input.nextInt();
while(y != 0){
int carry = (x & y);
x = x ^ y;
y = carry << 1;
}
System.out.println("Sum: "+x);
}}
```

Program Flow:

1. Two integer x,y are taken to give the number
2. Scanner is used to take the input from the user to give the required number
3. While loop is used. The AND logic is performed for values X and Y. And its carry is taken. XOR is performed for X and Y and the carry is added to it to give the result of sum of two numbers.

Java File & Class file:



Sum.java



Sum.class

Output Screenshot:

Command Prompt

```
Microsoft Windows [Version 10.0.17134.407]
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C:\Users\SAmutha>cd\

C:\>cd c:\JPrgm

c:\JPrgm>javac Sum.java

c:\JPrgm>java Sum
Enter your first number:
3
Enter your second number:
8
Sum:11

c:\JPrgm>
```

2. Write a program to print the result of the following expressions provided the integer variable a is 20 and b is 10.

```
int b = a-- --a;
int c = a--;
int d = a>>2;
int e = a&b;☺
```

Program Code:

```
class Result
{
    public static void main(String[] args)
    {
        int a,b,c,d,e;
        a = 20;
        b = 10;
        b = a-- - --a;
        c = a--;
        d = a >> 2;
        e = a & b;
        System.out.println ("Value of b is :" + b);
        System.out.println ("Value of c is :" + c);
        System.out.println ("Value of d is :" + d);
        System.out.println ("Value of e is :" + e);
    }
}
```

Program Flow :

1. The value of a, b is given as they are integer a,b,c,d,e are taken as integer.
2. The expression given to be performed are mentioned in the program and the those value are displayed in the end of program.

Java file & Class File:



Screenshot of output:

```
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C:\Users\SAmutha>cd\

C:\>cd c:\JPrgm

c:\JPrgm>javac Result.java

c:\JPrgm>java Result
Value of b is :2
Value of c is :18
Value of d is :4
Value of e is :0

c:\JPrgm>
```