ASSIGNMENT 1

1. Check if given no is EVEN or ODD

1. start
2. int num;
3.   if num % 2 == 0

       num is even number

    else

       num is odd number

4. END

2. Write a java program to find the factorial of a given number

1. start
2. int num, result = 1;
3.   for (i = 1; i <= num; i++)

       result = result * i;

4.   factorial of num = result

5.   END

3. find the factorial of a number using Recursion

1. start
2. int num1;
3. f(int num) { if (num == 1)

       return 1

      else

       return num * f(num-1)

    }

4. END

4. Swap Two numbers without using 3rd variable approach

1. start
2. int n, y
3. n = n + y - (y = n)
4. print (n, y)
5. END

5 How to check whether the given number is positive or negative in java?

1. start
2. int num;
3. if num < 0
   num is negative
   else
   num is positive
4. STOP

6. Write a java program to whether a given number is leap year or NOT

1. START
2. int year;
3. if (year % 4 == 0 and year % 100 != 0 or year % 400 == 0)
   year is a leap year
   else
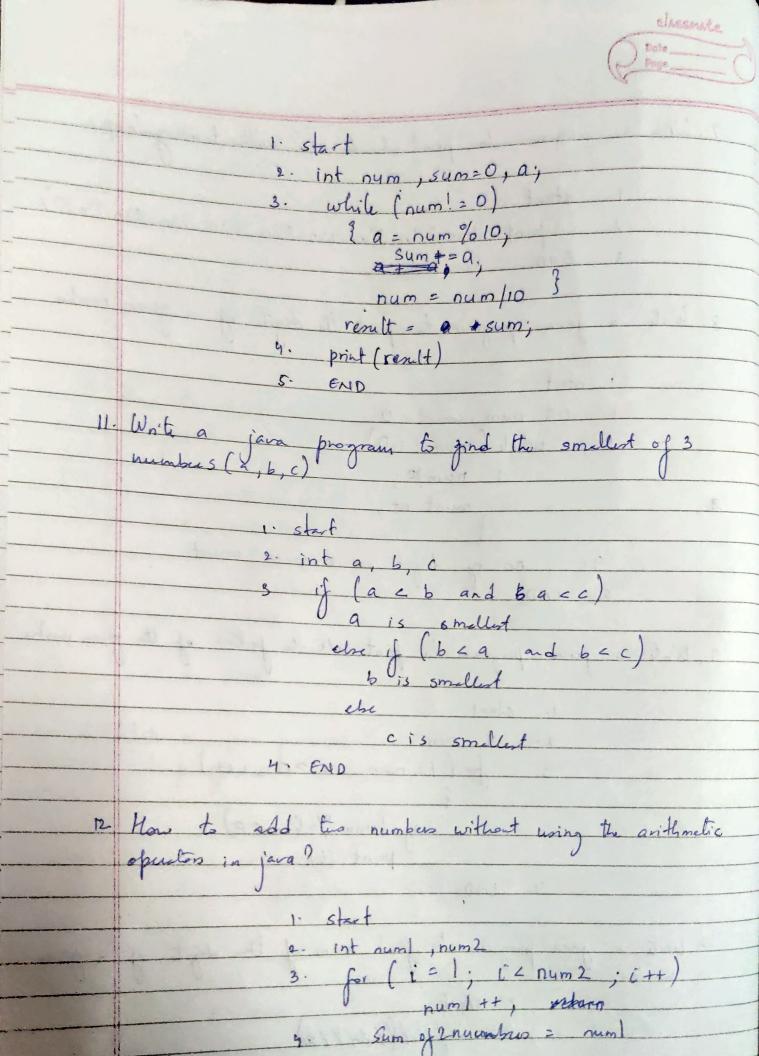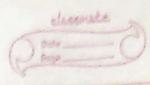   year is not a leap year
4. END

7. Write a program to print 1 to 10 without using loop

1. start
2. print (1\n 2 \n 3\n 4\n 5\n 6\n 7\n 8\n 9\n 10)
3. END

8. Write a java program to print the digits of a given number

1. start
2. int num, count = 0
3. while (num! = 0)
    { num%10;
       count ++;
    }
4. no of digit in num = count
5. END

9. Write a java program to print all the factors of the given number

1. start
2. int num
3. for (i = num , i > 0 ; i++)
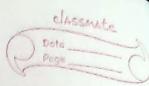   {
      if (num % i == 0)
      print (i)

4. END

10. Write a java program to find sum of the digits of a given number

1. start
2. while (num % 10)

```
1. start
2. int num , sum=0, a;
3.    while (num!=0)
         { a = num % 10;
           sum += a;
           num = num/10 }
      result = a * sum;
4.    print (result)
5.    END
```

11. Write a java program to find the smallest of 3 numbers (a, b, c)

```
1. start
2. int a, b, c
3. if (a < b and a < c)
        a is smallest
     else if (b < a and b < c)
        b is smallest
     else
        c is smallest
4. END
```

12. How to add two numbers without using the arithmetic operators in java?

```
1. start
2. int num1, num2
3. for (i=1; i < num2; i++)
        num1 ++, return
4. Sum of 2 numbers = num1
```
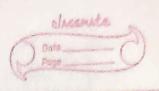
13. Write a java program to reverse a given number

    1. start
    2. int num, remainder, reverse;
    3. while (num 1 = 0)
       {

          remainder = num % 10;
          reverse = (reverse * 10) + remainder;
          num = num/10;
       }

       print (reverse)
    5. END

:-)

14. Write a java program to find GCD of 2 given number

    1. start
    2. int a, b
    3. if while (a≠ b

    3. while (a != b)
      {

        if (a > b)
         a = a-b;
        else
         b = b-b
      }
    4. print (GCO = , a)
    5. END

15. Write a java program to find LCM of 2 given numbers

1. start
2. int x, y, LCM, a=x, b=y;
3. while (x!=y)
   { if (x>y)
        x=x-y
     else

   }   y=y-x
       GCD = x;
4.   LCM = (a*b) / GCD;
5.   print (LCM);
6.   END

16. Write a java program to find LCM of 2 given numbers using the prime factors method

17) Check whether the given number is Palindrome or Not

```
1. start
                                  num1
2. int num1 = 12321, num2; remainder, reverse;
          num2 = num1;
3. while (num1 > 0)
      {  remainder = num1 %10;
         reverse = (reverse * 10) + remainder;
         num1 = num1/10;}
4.   if ( num1 == num2)
         print ( it is palindrome ) else (not palint)

5.  END
```

18) Write a Java program to print all the prime factors of the given number

```
1. Start
2. int num1,
     for ( i=2 ; i < num1 ; i++)
       {
            while ( num1 % i == 0)
              {
                   print (i)
                   num1 = num1/i;
              }
       }        if ( num1 > 2)  print (num1)
3. END
```

19. To print the following series EVEN number Series

2, 4, 6, 8, 10, 12, 14, 16 . . .

1. start
2. int num
   if num
3. for (i = 2, i <= num ; i + 2)
       print (i)
4. END

20. To print the following series ODD number series

1, 3, 5, 7, 9, 11, 13 . . .

1. start
2. int num
3. for (i = 1 ; i <= num ; i + 2)
       print (i)
4. END