ASSIGNMENT NO.1

1. Check the given number is EVEN or ODD.

1. Start.
2. Read an input number N from the user.
3. Divide the number N by 2.
4. If N % 2 == 0
   4.1 print number is even
   4.2 else print number is odd.
5. Stop.

2.Write a Java Program to find the Factorial of given number.

1. Start
2. Read an input number N from the user.
3. Initialize variables i = 1 and fact = 1;
4. For i <= N
   4.1 Calculate fact = fact*i
   4.2 Increment i and go to step 4
5. Print Fact
6. Stop

3. Find the Factorial of a number using Recursion.

1. Start
2. Read an input number N from the user.
3. Call fact = factorial (N)
   3.1 If N == 0 return 1
   3.2 else return N*factorial(N-1)
4. Print fact
5. Stop.

4. Swap two numbers without using third variable approach.

1. Start
2. Read two numbers x and y
3. x = x + y
4. y = x – y
5. x = x – y
6. print x and y
7. Stop

5. How to check the given number is Positive or Negative in Java?

1. Start
2. Read an input number N
3. If N > 0, print Number is Positive
4. Else print Number is Negative
5. Stop

6. Write a Java Program to find whether given number is Leap year or NOT?

1. Start
2. Enter the year
3. If the year % 4 = 0 and year % 100 != 0 or year % 400 = 0 go to step 4 else step 5
4. Print the year is a leap year.
5. Print the year is not a leap year.
6. Stop

7. Write a Java Program to Print 1 To 10 Without Using Loop.

1. Start
2. Initialize int n = 1
3. If n <= 10
   3.1 Print n
   3.2 Perform n++ and go to step no. 3
4. Stop

8. Write a Java Program to print the digits of a Given Number.

1. Start
2. Read an input number N
3. Initialize i=0, j=0 and remainder r
4. While N! = 0
   4.1 Calculate r = N%10 to extract the last digit
   4.2 Put r in array arr[i]
   4.3 Increment i
   4.4 calculate N/10 to get new value of N without the last digit
   4.5 Repeat till N! = 0
5. print array in reverse order
6. Stop

9. Write a Java Program to print all the Factors of the Given number.

1. Start
2. Read an input number N
3. Initialize i = 1
4. For i<=N
   4.1 if num % i = 0
   4.2 print i
   4.3 increment i and repeat step 4 until I <= N
5. Stop

10. Write a Java Program to find sum of the digits of a given number.

1. Read an input number N
2. Initialise sum = 0 and remainder r
3. While N! = 0
4. Calculate r = N%10
5. Calculate sum = sum + r
6. calculate N/10 to get new value of N without the last digit
7. Repeat till N! = 0

8. Print sum
9. Stop

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

1. Start.
2. Read three numbers in a, b, c.
3. Check whether if a is less than b and c
4. If true print a is the smallest number else go to step 5
5. Check whether if b is less than a and c
6. If true print b is the smallest number else go to step 7
7. Print c is the smallest number
8. Stop

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

1. Start
2. Read two input numbers a and b
3. While (b! =0)
   3.1 Increment a
   3.2 Decrement b
4. Print a

13. Write a java program to Reverse a given number.

1. Start
2. Read an input Number N
3. Initialize rev = 0 and remainder r
4. While N! = 0
   4.1 calculate r = N % 10
   4.2 calculate rev = rev*10 + r
   4.3 calculate N/10
5. Repeat till N!=0 and Print reverse = rev
6. Stop

14. Write a Java Program to find GCD of two given numbers.

1. Start
2. Read two input numbers a and b
3. Initialize i = 1
4. For i<=a and i<=b
   4.1 if a % i = 0 and b % I = 0, print gcd = i
   4.2 increment i and repeat step 4 until i<=a and i<=b
5. Stop

15. Write a java program to LCM of TWO given number.

1. Start
2. Read two numbers a and b
3. Initialize max and lcm

4. If a>b, max = a
5. If b>a, max = b
6. To check LCM,
   while a!=0
   6.1 If max % a == 0 and max % b == 0
   6.2 lcm = max , Print Lcm
   6.3 else increment max and go to step no. 6.1
7. Stop

16. Write a java program to LCM of TWO given number using Prime Factors method.

17. Check whether the Given Number is a Palindrome or NOT.

1. Start
2. Read an input Number N
3. Initialize temp and temp = N
4. Initialize rev = 0 and remainder r
5. While N! = 0
   5.1 calculate r = N % 10
   5.2 calculate rev = rev*10 + r
   5.3 calculate N/10
   5.4 Repeat till N! =0
6. Compare the temp = rev
7. If both numbers are same, print Given Number is a Palindrome
8. Else print Given Number is a not a Palindrome
9. Stop

18. Write a Java Program to print all the Prime Factors of the Given Number.

19. To print the following series EVEN number Series 2 4 6 8 10 12 14 16 .....

1. Start
2. Initialise i = 1
3. For i <= 20 or range
   3.1 increment i
   3.2 print i
   3.3 increment i and repeat till I <=20
4. Stop

20. To print the following series ODD number Series 1 3 5 7 9 11 13 ....

1. Start
2. Initialise i = 1
3. While i <= 20 or range
   3.1 print i
   3.2 calculate i += 2 and repeat till I <=20 or range
4. Stop