**Exercise 1**

1. WAP to check is a number is divisible by 5

2. WAP to check is a number is even or odd

3. WAP to check if roots of a quadratic equation are real, real and equal or imaginary

4. WAP to print grade of a student

Less than 40 - NC

40 - Less than 50 - D

50 - Less than 60 - C

60 - Less than 70 - B

70 - Less than 80 - A

80 and Above - O

5. WAP print the Electricity Bill

Upto 200 - 0.5/unit

201 - 500 - 1/unit for units consumed above 200

501 - 1000 - 2.5/unit for units consumed above 500

1001 - 1500 - 3.5/unit for units consumed above 1000

1501 - 2500 - 5/unit for units consumed above 1500

Above 2500 - 10/unit for units consumed above 2500

# Exercise 2

1. WAP to generate even numbers till the nth number
2. WAP to check if a number is prime or not
3. WAP to generate a fibonacci series upto nth term
4. WAP to find sum of n natural numbers
5. WAP to generate series 2, 5, 10, 17 .... nth
6. WAP to generate prime series between 1 and 100
7. WAP to check if a number is armstrong number or not
8. WAP to check if a number is a perfect square or not
9. WAP to check if a number is digit palindrome or not
10. WAP to find factorial of a given number
11. WAP to check if a year is a leap year or not
12. WAP to print pascal's triangle
13. WAP to sum the series 4/3 + 9/4 + 16/5 + 25/6 + ....... nth term
14. WAP to find HCF of two numbers
15. WAP to generate perfect squares between 1 and 500
16. WAP to sum the series 4/2! +9/3! + 16/4! + ..... nth term

**Exercise 3**

1. WAP to check if a string is Palindrome or not
2. WAP that takes string as multiple words and then capitalize the first letter of each word and forms a new string
3. WAP to read a string and display the longest substring of the given string having just the consonants
4. WAP to read a string and then prints a sting that capitalizes every other letter in the string e.g. goel becomes gOeL
5. WAP to read an email id of a person and verify if it belongs to banasthali.in domain
6. WAP to count the number of vowels and consonants in an input string
7. WAP to read a sentence and count the articles it has
8. WAP to read a string and check if it has "good" in it

**Exercise 4**

1. WAP to find minimum element from a list of integers alongwith its index in the list
2. WAP to calculate mean of a given list of numbers
3. WAP to search an element in a list
4. WAP to count the frequency of an element in a list
5. WAP to find second largest number of a list
6. WAP to input a list of numbers and shift all zeros to the right and all non zeros to left of the list
7. WAP to add two matrices
8. WAP to multiply two matrices
9. WAP to print transpose of a matrix
10. WAP to add elements of diagonal of a matrix

**Exercise 5**

1. Write a function in python to find max of three numbers
2. Write a function in python to sum all the numbers in a list
3. Write a function in python to multiply all the numbers in a list
4. Write a function in python to reverse a string
5. Write a function in python that checks whether a passed string is palindrome or not
6. Write a function in python to access a function inside a function
7. Write a function in python to generate even series upto the nth term
8. Write a function in python to check if a number is prime or not
9. Write a recursive function in python to sum all the numbers in a list
10. Write a recursive function in python to multiply all the numbers in a list
11. Write a recursive function in python to reverse a string
12. Write a recursive function in python that checks whether a passed string is palindrome or not
13. Write a recursive function in python to generate even series upto the nth term
14. Write a recursive function in python to check if a number is prime or not
15. Write a recursive function in python to generate prime series between ranges inputted by a user.

**Lab 6**

1. WAP to read a file and print the number of characters, words and lines it has
2. WAP to copy contents of one file into another file
3. WAP to read a file and count the number of vowels it has
4. WAP to read a file and count the number of articles it has
5. WAP to read a file reverse the contents of file (last line of the file should become the first line of the file)