

## **EXERCISES**

### **CONDITIONALS**

1. Write a program to check whether a given number is positive or negative
2. Write a program to accept the height of a person in centimeter and categorize the person according to their height.  
Dwarf – When the height is less than 150  
Average – When the height within 150 and 165  
Tall – When the height is within 165 and 195  
Giant – When the height is greater than 195
3. Write a program to find the largest of three numbers.
4. Write a program to find the eligibility of admission for a professional course based on the following criteria  
Marks in Maths  $\geq 65$   
Marks in Phy  $\geq 55$   
Marks in Chem  $\geq 50$   
Total in all three subject  $\geq 180$   
or  
Total in Math and Subjects  $\geq 140$
5. Write a program to read temperature in centigrade and display a suitable message according to temperature state below  
Temp  $< 0$  then Freezing weather  
Temp 0-10 then Very Cold weather  
Temp 10-20 then Cold weather  
Temp 20-30 then Normal in Temp  
Temp 30-40 then Its Hot  
Temp  $\geq 40$  then Its Very Hot
6. Write a program to check whether a triangle is Equilateral, Isosceles or Scalene
7. Write a program to check whether an alphabet is a vowel or consonant
8. Write a program to read any Month Number in integer and display Month name in the word
9. Write a program to calculate profit and loss on a transaction. The Cost Price and Selling price is collected from the user

#### **EXAMPLE:**

Cost Price: 300

Selling Price: 500

#### **OUTPUT:**

You made a profit of 200 on this transaction.

10. Write a program to calculate and print the Electricity bill of a given customer. The customer name and unit consumed by the user should be taken from the keyboard and display the total amount to pay to the customer. The charge are as follow

Unit	Charge/unit
Up to 199	@1.20
200 and above but less than 400	@1.50
400 and above but less than 600	@1.80
600 and above	@2.00

**If the Bill exceeds 400, an additional 15% charges should is incurred.**

**EXAMPLE:**

Toyyib

300

**OUTPUT**

Customer Name: Toyyib

Unit Consumed: 300

Rate: 1.50 Per Unit

Additional Charge: None

Total : 450

**LOOPS**

1. Write a program to display n terms of natural number and their sum

**Example:**

Input: 7

**Output:**

1 2 3 4 5 6 7

Sum : 28

2. Write a program to display the cube of the number up to given an integer

**Example:**

Input: 5

**Output:**

1 – 1

2 – 8

3 – 27

4 – 64

5 – 125

3. Write a program to display the multiplication table of a given integer

4. Write a program to sum all the digits of an integer

5. Write a program that prints the following pattern for n

1

12

123

1234

6. Write a program that prints the following pattern for n

1

22

333

4444

7. Write program to calculate the factorial of a given number

8. Write a program to display the n terms of square natural number and their sum

1 4 9 16 25

9. Write a program to find the sum of the series 1 +11 + 111 + 1111 + .. n

EXAMPLE:

Input: 5

OUTPUT :

1 + 22 + 333 + 4444 + 55555

The Sum is : 60355

10. Write a program to convert a decimal number into binary

**STRINGS**

1. Write a program to print individual characters from a string on different lines

2. Write a program to print individual characters from a string on different lines in reverse order

3. Write a program to count the number of vowels in a string

4. Write a program to count the number of words in a string

5. Write a program to get all the character in a string uniquely
6. Write a program to check if a string is present another string
7. Write a program that capitalizes the first letter of all words in a sentence
8. Write a program that removes all special characters from a string(this includes space)
9. Write a program to find maximum occurring character in a string
10. Write a program to read a sentence and replace lowercase characters by uppercase and vice-versa

### **ARRAY**

1. Write a program in to find the sum of all elements of the array
2. Write a program to determine if all the elements in an array is strictly increasing
3. Write a program in to copy the elements one array into another array
4. Write a program in to count a total number of duplicate elements in an array
5. Write a program in to find maximum and minimum element in an array
6. Write a program to sum all elements at odd index of an array
7. Write a program in to print all unique elements in an array
8. Write a program to check if two arrays are equal
9. Write a program to swap elements at even index of an array with neighboring odd index element
10. Write a program to print maximum sequence of consecutive equal elements of an array.  
    {1,1,2,3,2,2,2,1} -> {2,2,2}