**Lab Sheet 4**

**More if-else**

1. Write a program that accepts a number and prints whether the number is completely divisible by 5 or not.

**Sample input and output:**

Enter a number: 10 //input

10 is completely divisible by 5 //output

Enter a number: 11 //input

11 is not completely divisible by 5 //output

1. Write a program to read two numbers from the user and check whether the first number is divisible by the second number or not.

**Sample input and output:**

Enter two numbers: 25 5 //input

25 is divisible by 5 //output

Enter two numbers: 24 5 //input

24 is not divisible by 5 //output

1. Write a program to calculate the bill of a DTP work as follows. Use if-else statement
   1. The rate of typing Rs. 3/Page
   2. Printing of first copy Rs.5/page and later every copy Rs.3/Page.

The user should enter the number of pages and number of copies he/she wants.

**Sample input and output:**

Enter the number of pages: 2 //input

Enter the number of copies: 3 //input

Total amount to be paid is Rs. 28 //output

**Conditional operator**

1. Read two numbers from the user and find the *largest*.
2. Read three numbers from the user and find the *smallest*.

**Switch – case**

1. Write a program to calculate (1) Sum (2) Difference (3) Product (4) Quotient (5) Remainder (6) Larger out of two given numbers using switch statements.

**Sample input and output:**

Enter two numbers: 10 4

* 1. Sum
  2. Difference
  3. Product
  4. Quotient
  5. Remainder
  6. Largest

Enter the option for the operation you need to perform: 2

The difference between 10 and 4 is 6 //output

1. Remove break statements from the above program and test. What is the difference?
2. Write a program to determine whether an entered character is a vowel or not.

Try as follows:

Switch(ch)

{

case ‘A’:

case ‘a’:

printf(“\n%c is a vowel”,ch);

break;

…..

…..

Remaining cases goes here

}

**Let’s go Competitive**

1. An elephant decided to visit his friend. It turned out that the elephant's house is located at point 0 and his friend's house is located at point x(x > 0) of the coordinate line. In one step the elephant can move 1, 2, 3, 4 or 5 positions forward. Determine, what is the minimum number of steps he needs to make in order to get to his friend's house.

Input  
The first line of the input contains an integer x (1 ≤ x ≤ 1 000 000) — The coordinate of the friend's house.

Output  
Print the minimum number of steps that the elephant needs to make to get from point 0 to point x.

Sample Input: 5

Sample Output: 1

Sample Input: 12

Sample Output: 3

**After completing this question, submit in codeforces.com**

[**https://codeforces.com/problemset/problem/617/A**](https://codeforces.com/problemset/problem/617/A)

1. Alice and Bob are decorating a Christmas Tree. Alice wants only 3 types of ornaments to be used on the Christmas Tree: yellow, blue and red. They have *y* yellow ornaments, *b* blue ornaments, and *r* red ornaments.

In Bob's opinion, a Christmas Tree will be beautiful if:

* the number of blue ornaments used is greater by exactly 1 than the number of yellow ornaments, and
* the number of red ornaments used is greater by exactly 1 than the number of blue ornaments.

That is, if they have 8 yellow ornaments, 13 blue ornaments, and 9 red ornaments, we can choose 4 yellow, 5 blue and 6 red ornaments (5=4+1 and 6=5+1).

Alice wants to choose as many ornaments as possible, but she also wants the Christmas Tree to be beautiful according to Bob's opinion.

In the example two paragraphs above, we would choose 7 yellow, 8 blue, and 9 red ornaments. If we do it, we will use 7+8+9=24 ornaments. That is the maximum number.

Since Alice and Bob are busy with preparing food to the New Year's Eve, they are asking you to find out the maximum number of ornaments that can be used in their beautiful Christmas Tree!

It is guaranteed that it is possible to choose at least 6 (1+2+3=6) ornaments.

Given y,b,r (no: of ornaments of the color yellow, blue and red respectively), print the maximum number of ornaments that can be used (It is guaranteed that it is possible to choose at least 6 (1+2+3=6) ornaments).

**After completing this question, submit in codeforces.com**

<https://codeforces.com/problemset/problem/1091/A>