K. J. Somaiya College of Engineering,
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Batch: G3	**Roll No.: 16010421063**
Experiment / assignment / tutorial No. 2	
Grade: AA / AB / BB / BC / CC / CD /DD	
Signature of the Staff In-charge with date	

TITLE: Write a program to accept 3 numbers from the user and find the largest of the 3 numbers using
If - else if-else
Ternary operator

AIM: Write a program to accept 3 numbers from the user and find the largest of the 3 numbers using
If - else if-else
Ternary operator

Expected OUTCOME of Experiment:
CO2: Apply basic concepts of C programming for problem solving

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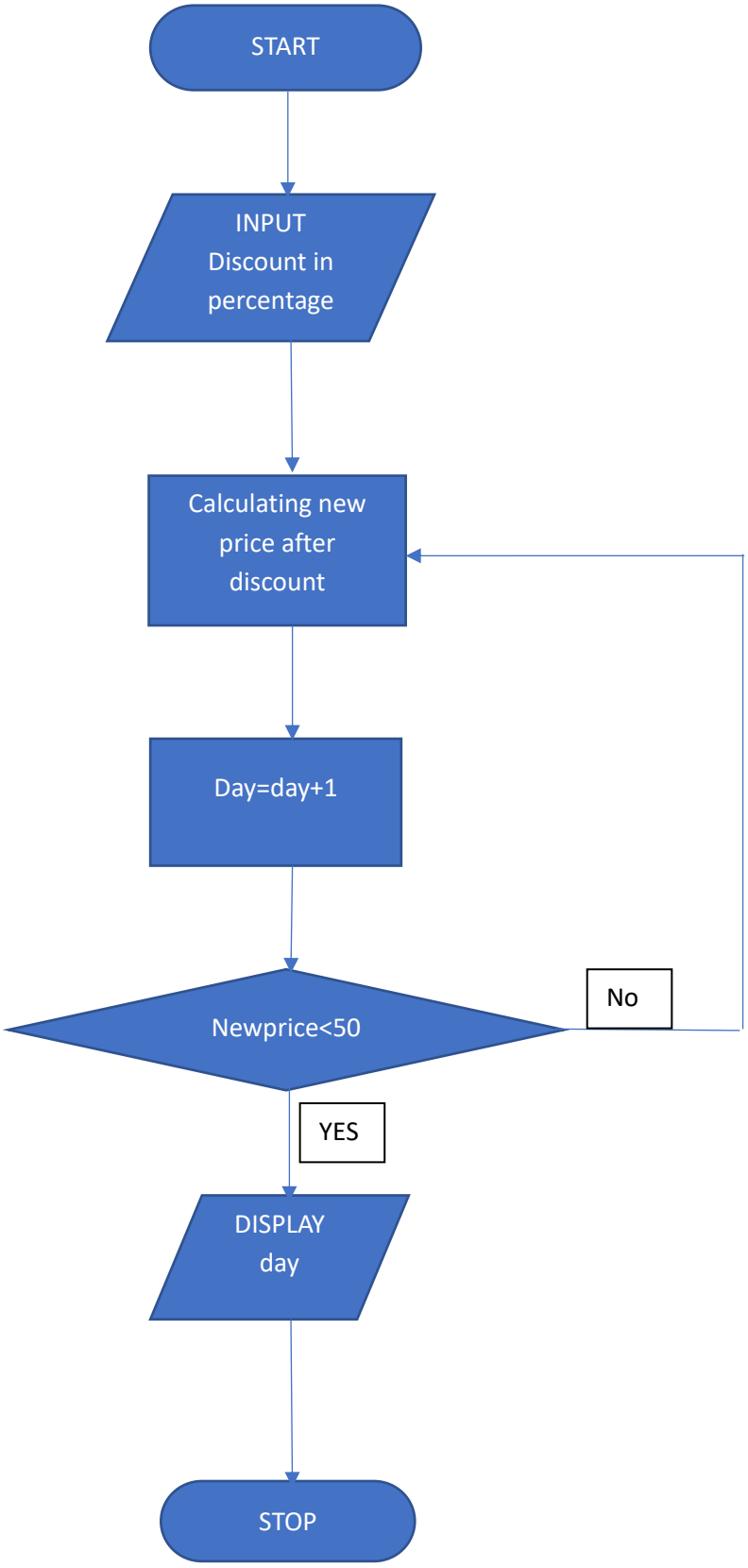
Books/ Journals/ Websites referred:

1. Programming in C, second edition, Pradeep Dey and Manas Ghosh, Oxford University Press.
2. Programming in ANSI C, fifth edition, E Balagurusamy, Tata McGraw Hill.
3. Introduction to programming and problem solving , G. Michael Schneider ,Wiley India edition.
4. **http://cse.iitkgp.ac.in/~rkumar/pds-vlab/**

Problem Definition:

Ask user to input three numbers. Compare three numbers to find the largest of them using
1. Nested if else statement
2. Using ternary operator

Flowchart:


START
INPUT
Discount in
percentage
Calculating new
price after
discount
Day=day+1
Newprice<50
No
YES
DISPLAY
day
STOP

Implementation details:

```
#include<stdio.h>

//Code by Arya Nair
int main()
{
    int price=100, discount;
   //Getting discount percentage from user
    printf("Enter discount value: ");
    scanf("%d",&discount);

    int day=0,i;

    while( i==0)
    {
       //calculating discounted amount
       float discount_amount = (discount*price)/100;
       float dprice = (price-discount_amount);
       if (price<50)
       {
          i=1;
          break;
       }
       else{
         price=dprice;
         day++;
       }

    }
    //Code by Arya Nair
    //giving user the day
    printf("The price will become half on: Day %d",day);
   return 0;
}
```

Output(s):

Conclusion:

This program used if-else statements and while loops to give us our desired output. This helped me understand the various use cases of if-else statements.

Post Lab Descriptive Questions

1. Explain bitwise operators with examples

Ans-

Bitwise operators are characters that represent actions to be performed on single bits. A bitwise operation operates on two-bit patterns of equal lengths by positionally matching their individual bits. The most commonly used Bitwise operators are And(&&) and Or(||)

Examples-

&	Bitwise And
|	Bitwise Or
^	Bitwise EXOR
<<	Left shift
>>	Right shift
-	Complement

2. Write a code snippet to perform left shifting of bits by some positions

Ans-

```
#include<stdio.h>

int main()
{
   int num,iter;
   printf("Enter number you would like to left shift: ");
   scanf("%d",&num);
   printf("How many times do you want to shift: ");
   scanf("%d",&iter);

   printf("%d",num<<iter);
   return 0;
}
```

3. Write associative rules and precedence table of various operators.

Ans-

ASSOCIATIVITY	OPERATOR	DESCRIPTION
left to right	( ) [ ] . -> + + - -	Parentheses/Function call Brackets Dot Arrow Operator Postfix Increment/Decrement
right to left	+ + - - + - ! ~d (type) * & size of	Prefix Increment/Decrement Unary plus and minus not operator and bitwise complement type cast dereference operator Address of operator Determine size of bytes
left to right	+ - * / %	Addition and Subtraction Multiplication, Division and Modulus
left to right	<< >> < <= > >= = = ! = & ^ | && | |	Bitwise left shift and right shift Relational less than/less than equal to Relational greater than/greater than equal to Relational equal to and not equal to Bitwise And Bitwise exclusive Or Bitwise inclusive Or Logical Or Logical Or
right to left	? :	Ternary Operator
right to left	= += -= *= /= %= &= ^= |= <<= >>=	Assignment Operator Addition/Subtraction Assignment Multiplication/Division Assignment Modulus/Bitwise And Assignment Bitwise Inclusive/Exclusive Or Assignment Bitwise Shift Left/Right Assignment
left to right	,	Comma Operator

4. What are different storage class specifiers in C?

Ans-

The four storage classes in C are:

- Auto is used for a local variable declared in the scope.
- Register is used to store the variable in CPU registers rather memory location for quick access.
- Static is used for both global and local variables. Each one has its use case within a C program.
- Extern is used for data sharing between C project files.

Date: _____ **Signature of faculty in-charge**