NOWROSJEE WADIA COLLEGE, PUNE

Experiment Incomplete For
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Unit

Performed On 20/09/14
Signature

Submitted On 20/09/14.
Experiment Complete
Incharge

Name VRUSHIL SONI.
Class XI Sci Roll No. 7016 Batch Saturday Pair No.

Expt. No. Title INTRODUCTION TO DOS COMMANDS.

AIM: To study internal & external DOS commands.

Operating system is an interface between user and computer hardware. MS-DOS run on any intel 8088, 8086 or pentium class C.P.U.'s. The version of MS-DOS that runs on early IBM computers is called as PC-DOS. DOS is sixteen bit, single tasking & single user operating system. There is 640KB limit on the memory that is applicable to the application. DOS has simple text based command line interface and it consists of 3 files- 1] MSDOS.SYS, 2] COMMAND.COM, 3] IO.SYS. There are 3 types of DOS commands- 1] Internal commands 2] External commands & 3] Batch commands.

There are two ways to access command prompt.
1) Click on Start → Programs → Accessories → Command Prompt.
2) Click on Start → Run → Type 'cmd' → Press enter.

	Command	Description	Syntax.
1)	Help (external)	It displays a list of commands and gives brief explanation of the commands.	help ↵ help [command] ↵
2)	ver (internal)	It displays the operating system version number.	ver ↵
3)	cls (internal)	It clears the screen.	cls ↵
4)	date (internal)	It displays the system date and allows the user to set the system date.	date ↵
5)	time (internal)	It displays the system time & allows the user to change system time.	time ↵

	Command	Description	Syntax.
6)	dir (internal)	It displays the list of directories & files available in particular drive or directory.	dir ↵
7)	dir *.*	It displays the list of all directories & files present on the drive or directory with any name & any extension.	dir *.* ↵
8)	dir *.txt	It displays list of all files with any name but extension as .txt	dir *.txt ↵
9)	dir /P	It displays list of directories & files present on directories or drive page wise	dir /P ↵
10)	dir /w	It displays list of directories & files present on drive or directory width wise.	dir /w ↵
11)	md	It creates a directory or sub-directory at the specified location on a drive.	md directory name ↵
12)	cd	It changes the current directory.	cd vrushil ↵
13)	cd..	It specifies that the wants to change to the parent directory.	cd.. ↵
14)	cd \	It specifies that the user wants to change to the root directory.	cd \ ↵
15)	ren (internal)	It is used to rename a directory or file	ren directory name new dirname ↵
16)	rd (internal)	It is used to remove a directory.	rd dirname ↵
17)	copy con	It is used to create a new file with extensions such as .txt, .bat, etc.	copy con filename .extension ↵
18)	type (internal)	It is used to display the contents of files.	type filename.extension ↵

	Command	Description	Syntax.
19)	Copy.	It copies the contents of one file into another	Copy sourcefile destinationfile ↵
20)	del	It deletes a file.	del filename.extension ↵
21)	edit	It allows to edit the contents of the existing file.	edit filename.extension ↵
22)	chkdsk (internal)	It checks the disk and provides with file and memory status report.	
23)	Tree (external)	It displays the tree structure of particular directory.	
24)	Exit	It is used to exit from command prompt.	

F.Y.J.C. COMPUTER SCIENCE

PAPER – I

C++ PROGRAMS

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Name VRUSHIL SONI.
Class XI. Roll No. 7016. Batch Saturday. Pair No.

Expt. No. Title Implementation of SRO in OOP & POP concept

AIM: Write a program in C++ to Implement SRO in OOP & POP concept.

A] Use of SRO in POP:-

Program Analysis:-

Step 1: Start.

Step 2: Initialize global variable M=10.

Step 3: Redeclare M=20.

Step 4: Initialize K=M.

Step 5: Redeclare M=30.

Step 6: Print "we are in inner block:"

Step 7: Print "K".

Step 8: Print M.

Step 9: Print global M.

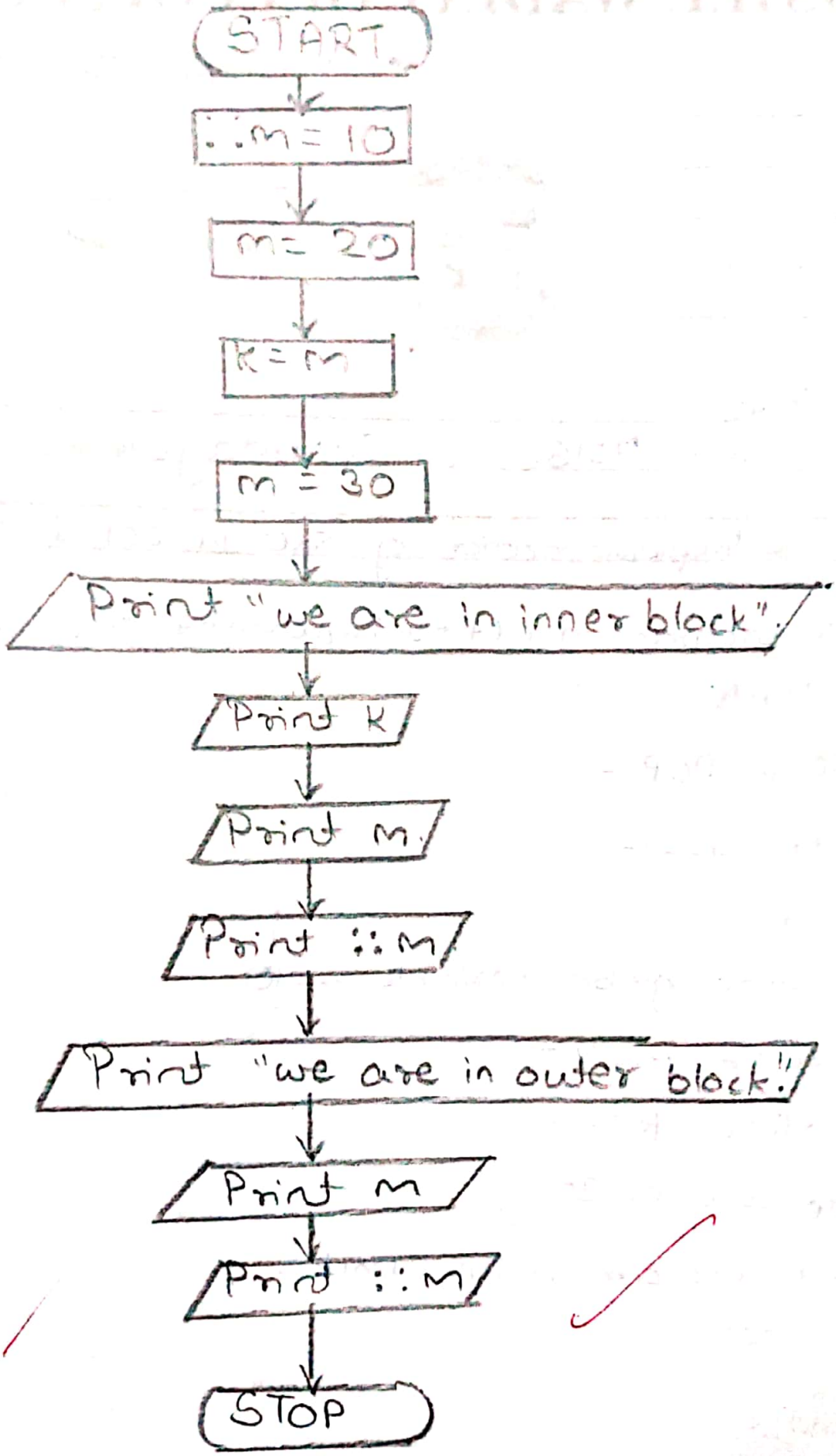
Step 10: Print "we are in outer block".

Step 11: Print M.

Step 12: Print global M.

Step 13: Stop.

Flowchart:-



se of SRO in OOP:-

Program Analysis:-

Step 1: Start.

Step 2: Declare array name [30] & variable age.

Step 3: Create functions getdata (void) & display (void).

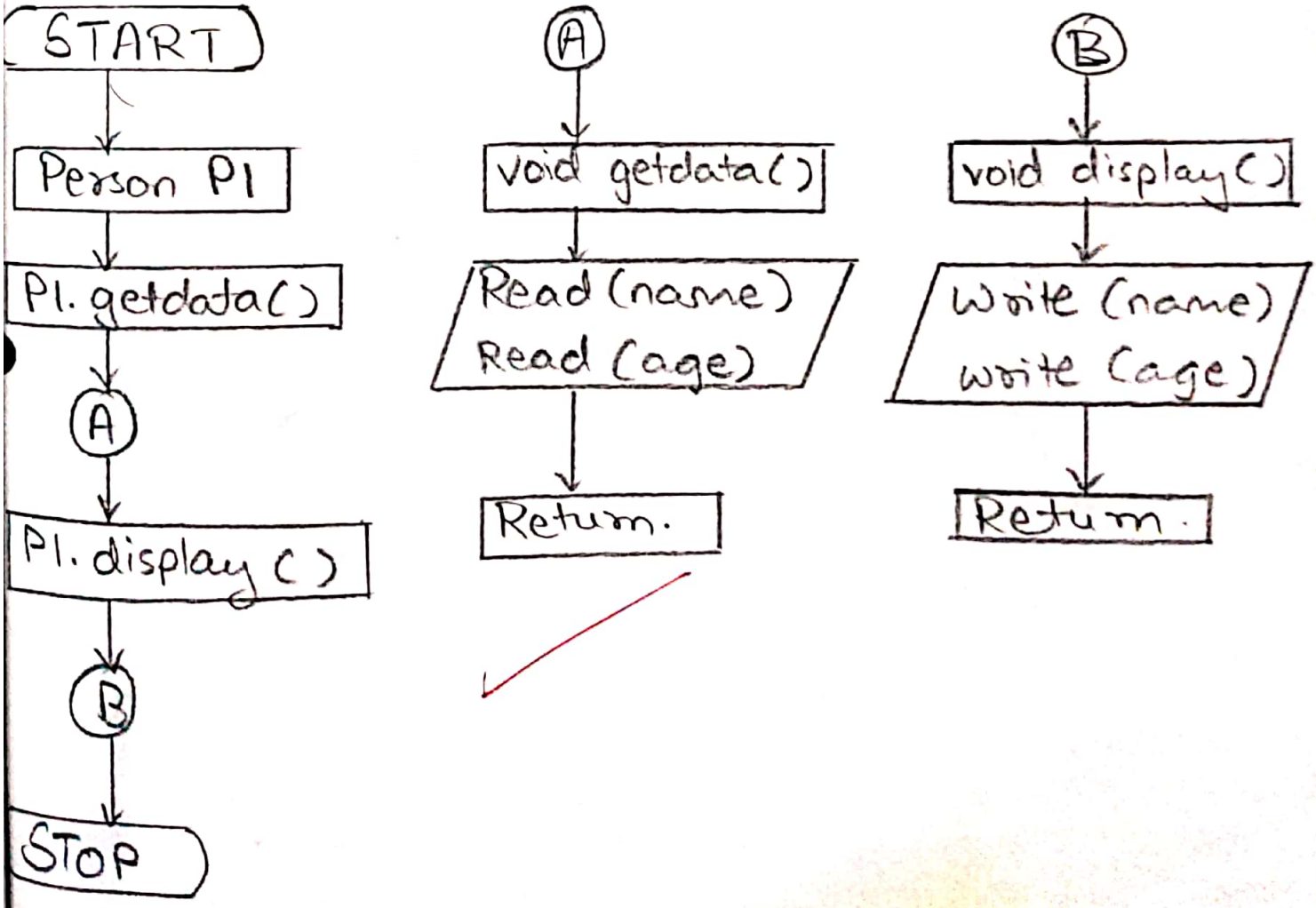
Step 4: Accept name & age using function getdata.

Step 5: Display name & age using display function.

Step 6: In order to execute the functions, create object P1 & call above functions.

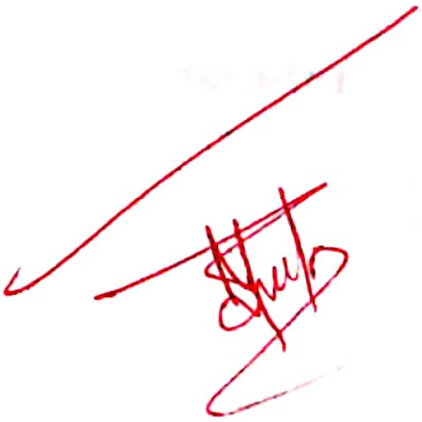
Step 7: Stop.

Flowchart:-



SRO1

```
//program performed by 7016
//program to implement sro in pop concept
#include<iostream.h>
#include<conio.h>
int m=10;//global variable declaration
int main()
{
 clrscr();
 int m=20;//m redeclared i.e. local to main
 {
 int k=m;//refers nearest value i.e. 20
 int m=30;//m is redeclared
 cout<<"we are in inner block"<<"\n";
 cout<<"k="<<k<<"\n";
 cout<<"m="<<m<<"\n";
 cout<<"::m="<<::m<<"\n";//refers global value
 }
cout<<"\n"<<"we are in outer block"<<endl;
cout<<"m="<<m<<"\n";
cout<<"::m="<<::m<<"\n";
getch();
return 0;
}
/* we are in inner block
k=20

m=30

::m=10


we are in outer block

m=20

::m=10*/
```



SRO2

```
//program performrd by 7016
//program to implement sro in oop concept
#include<iostream.h>
#include<conio.h>
class person
{
 char name [30];/*data members*/
 int age;
 public :
 void getdata(void);/*member function declaration /
prototype*/
 void display (void);
};//end of class declaration
void person ::getdata(void)//function header
{
 cout<<"enter the name";
 cin.getline(name,30);//reads one line including blank
space
 cout<<"enter age";
 cin>>age;
}
void person::display (void)//function header
{
 cout<<"\n  Name="<<name<<endl;
 cout<<"\n Age="<<age<<endl;
}
void main()
{
 person P1;//P1 is person name/object
 clrscr();
 P1.getdata();//invokes/calls get data member function
 P1.display();//invokes/calls display function
 getch();
}
/*enter the name vrushil soni
enter age 15


 Name= vrushil soni


Age=15*/
```

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Submitted On 13/12/14

Experiment Complete

Incharge C

Name VRUSHTI SONI.

Class XI Roll No. 7016 Batch Saturday Pair No. _____

Expt. No. _____ Title Implementation of Conditional Operator.

AIM: Write a program in C++ to implement conditional operator which finds the largest of 4 numbers.

Program Analysis:

Step 1: Start.

Step 2: Declare variables a, b, c, d & max.

Step 3: Write ("enter 4 nos.").

Step 4: Read as a, b, c, d.

Step 5: If a>b && a>c && a>d then max is a. Print a & go to step 9.

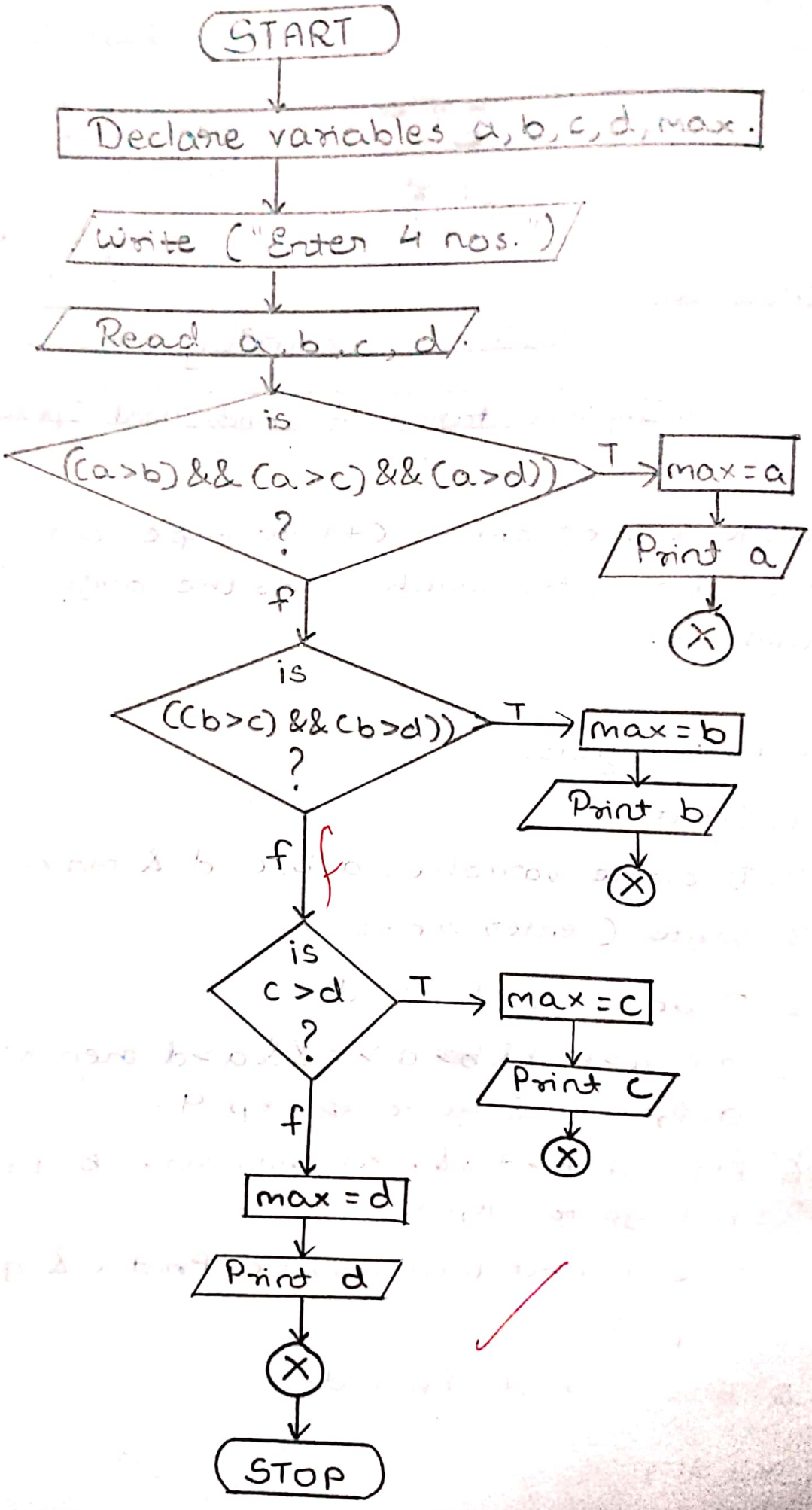
Step 6: Else if b>d && b>d then max=b. Print b & go to step 9.

Step 7: Else if c>d then max=c. Print c & go to step 9.

Step 8: Else max=d. Print d.

Step 9: Stop.

FLOWCHART:



~~SR02~~

VRUSHIL

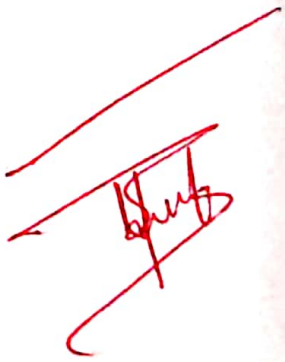
```
//Program performed by roll no 7016
//Program to implement conditional operator
#include<iostream.h>
#include<conio.h>
void main ()
{
clrscr();
int a,b,c,d,max;
cout<<"enter the 4 nos"<<endl;
cin>>a>>b>>c>>d;
max=((a>b)&&(a>c)&&(a>d))?a:((b>c)&&(b>d))?b:(c>d)?c:d;
cout<<"the max no="<<max<<endl;
getch();
}
/*enter the 4 nos
25

35

30

15

the max no=35*/
```



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Experiment Complete C
Incharge

Name VRUSHIL SONI.
Class XI Roll No. 7016 Batch Saturday. Pair No.

Expt. No. Title Implementation of nested if else statement.

AIM: Write a program in C++ to find roots of quadratic equation ax^2+bx+c where the values a, b, c are to be entered by user, using formula:

$x_1 = -b + sqrt(d) / 2xa$

$x_2 = -b - sqrt(d) / 2xa$

where $d = (bxb) - (4xaxc)$

PROGRAM ANALYSIS:-

Step 1: Start

Step 2: Declare a, b, c and float d, x, x_2.

Step 3: Write "Enter values for a, b, c".

Step 4: Read a, b, c.

Step 5: $d = d^2 - 4ac$

Step 6: If d > 0 then print two distinct roots.

Step 7: Calculate $x_2 = (-b \pm (b^2 - 4ac)) / 2a)$

Print x_1 & x_2.

then go to step 9.

If d = 0, then print "Equal roots"

$a_1 = (-b + sqrt(d)) / 2a$

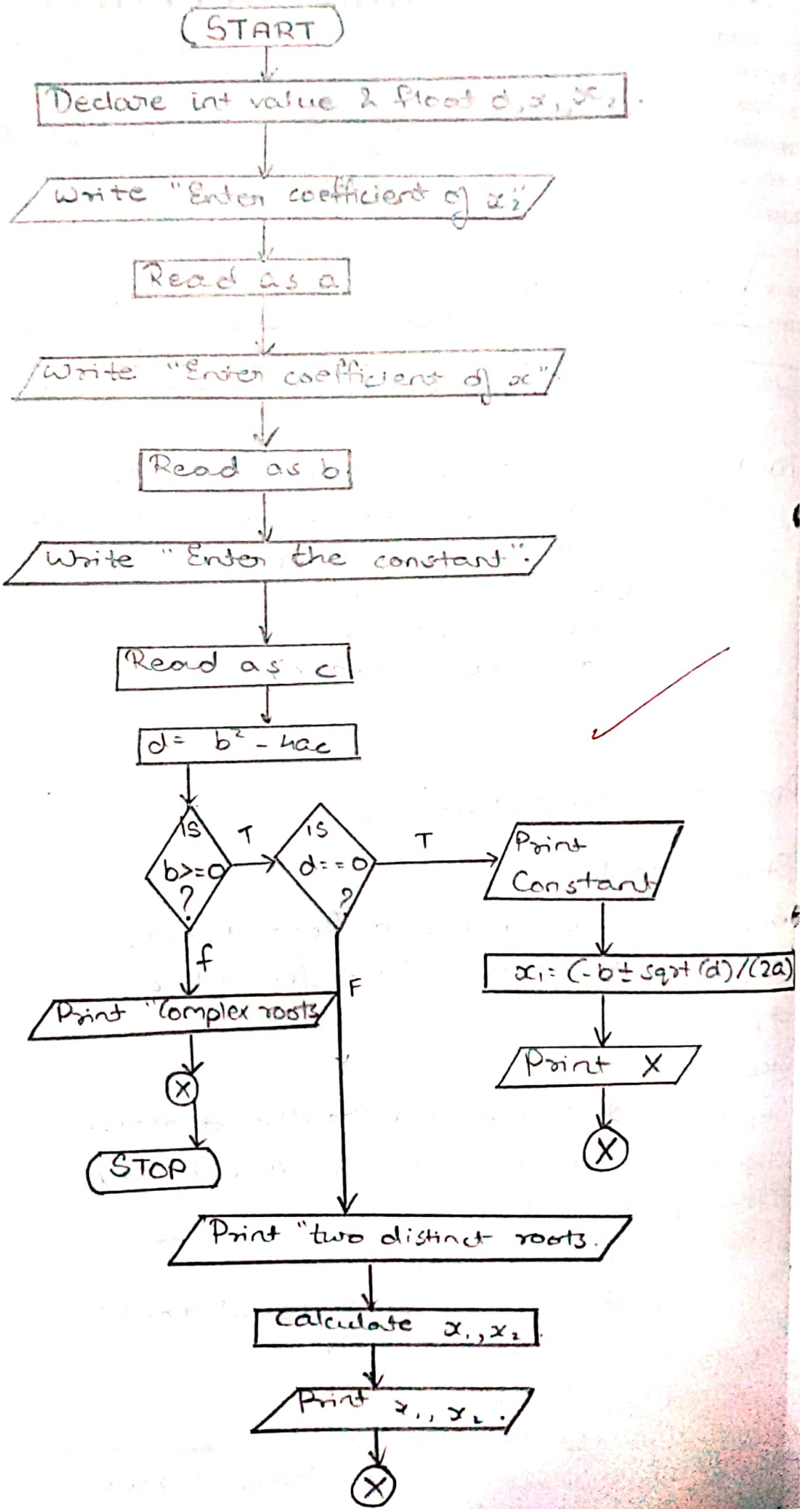
print x_1

then go to step 9.

Step 8: If d < 0 then print "Complex root".

Step 9: Stop.

Flowchart :-



```
//programme performed by roll no:7016                    NESTINGE.CPP
//implementation ofnested if else statement
#include<iostream.h>
#include<conio.h>
#include<math.h>
#include<stdlib.h>
#include<iomanip.h>
void main()
{
clrscr();
int a,b,c;
float d,x1,x2;
cout<<setw(40)<<"enter the coefficient of xA2"<<endl;
cin>>a;
cout<<setw(40)<<"enter the coefficient of x"<<endl;
cin>>b;
cout<<setw(40)<<"enter constant"<<endl;
cin>>c;
d=pow(b,2)-(4*a*c);
if(d>=0)
{
if(d==0)
{
cout<<setw(40)<<"equal roots"<<endl;
x1=(-b+sqrt(d))/(2*a);
cout<<setw(40)<<"x1="<<x1<<endl;
getch();
exit(0);
}
cout<<setw(40)<<"two distinct roots"<<endl;
x1=(-b+sqrt(d))/(2*a);
x2=(-b-sqrt(d))/(2*a);
cout<<setw(40)<<"x1="<<x1<<endl;
cout<<setw(40)<<"x2="<<x2<<endl;
getch();
exit(0);
}
else
{
cout<<setw(40)<<"complex roots"<<endl;
getch();
exit(1);
}
getch();
}
     /*              enter the coefficient of xA2
1
              enter the coefficient of x
-5
                        enter constant
6
                      two distinct roots
                                    x1=3
                                    x2=2
                                        */
```

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Experiment Complete C

Incharge

Name VRUSHIL SONI.

Class XI Roll No. 7016. Batch Saturday. Pair No. _____

Expt. No. _____ Title IMPLEMENTATION OF FOR LOOP.

AIM: Write a program in C++ to find factorial of a number using for loop.

Program Analysis: -

Step 1: Start.

Step 2: Declare i, n, fact = 1.

Step 3: Write 'enter a no.'.

Step 4: Read as n.

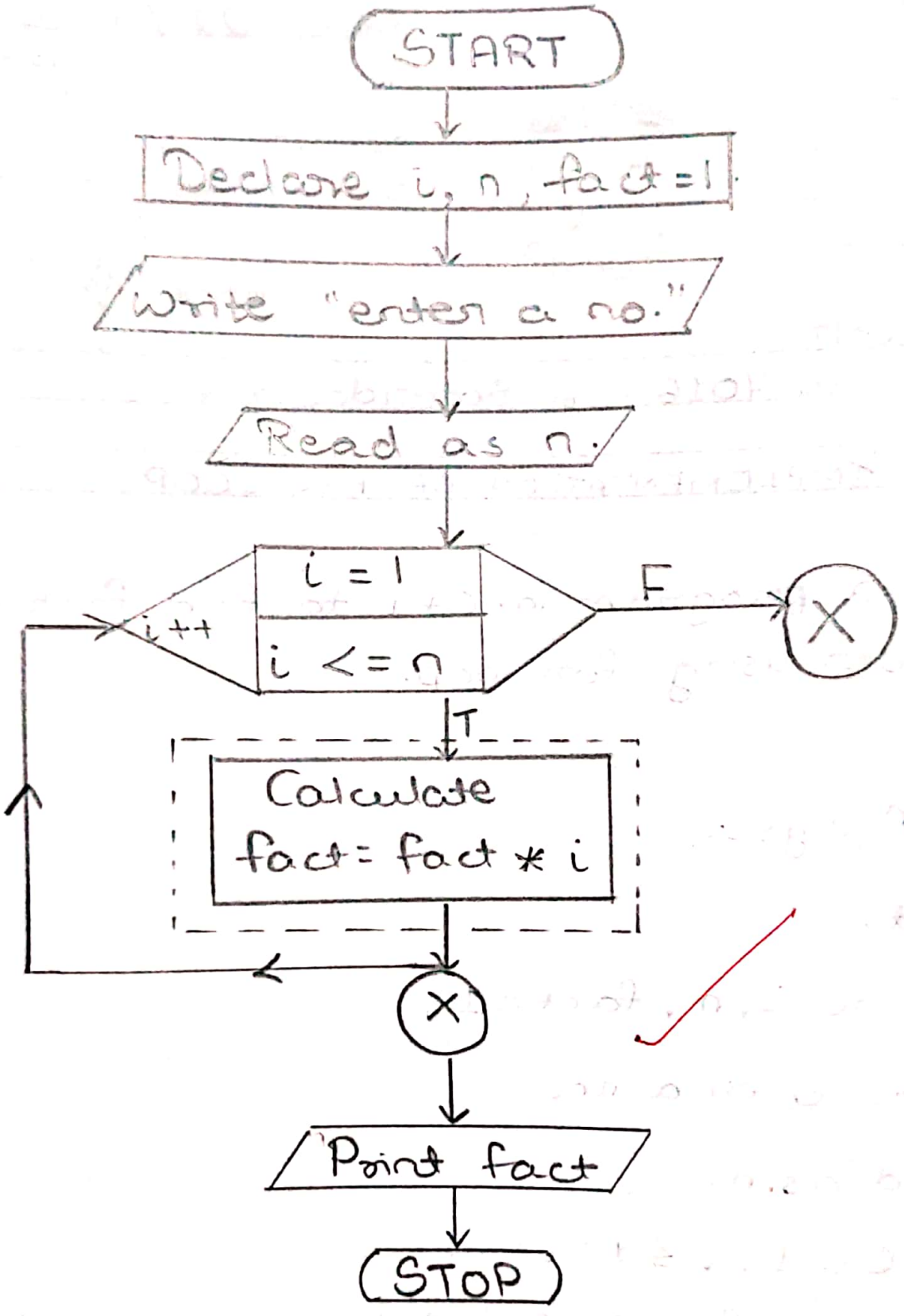
Step 5: for (i = 1; i <= 1; i++)

Calculate fact = fact * i.

Step 6: Print fact.

Step 7: Stop.

FLOWCHART :-



FOR_LOOP

```
//Program performed by roll no 7016
//Program to implement factorial
#include<iostream.h>
#include<conio.h>
void main ()
{
clrscr();
int i,n,fact=1;
cout<<"enter a no.";
cin>>n;
for(i=1; i<=n;i++)
{
fact= fact*i;
}
cout<<"factorial of"<<n<<"="<<fact;
getch();
}
/*enter a no.4
factorial of4=24*/
```

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Name VRUSHIL SONI.

Class XI Roll No. 7016 Batch Saturday Pair No. _____

Expt. No. _____ Title Prime Numbers using while loop.

AIM: Write a program in C++ to check whether entered number is prime or not using while loop.

PROGRAM ANALYSIS:-

Step 1: Start.

Step 2: Declare n, j and i=2.

Step 3: Set space as 40 & write "Enter a no.".

Step 4: Read as n.

Step 5: Check if n is equal to 1. If yes, then write "The no. is neither prime nor composite". Go to step 8.

Step 6: While (i<n)

Calculate j= n % i

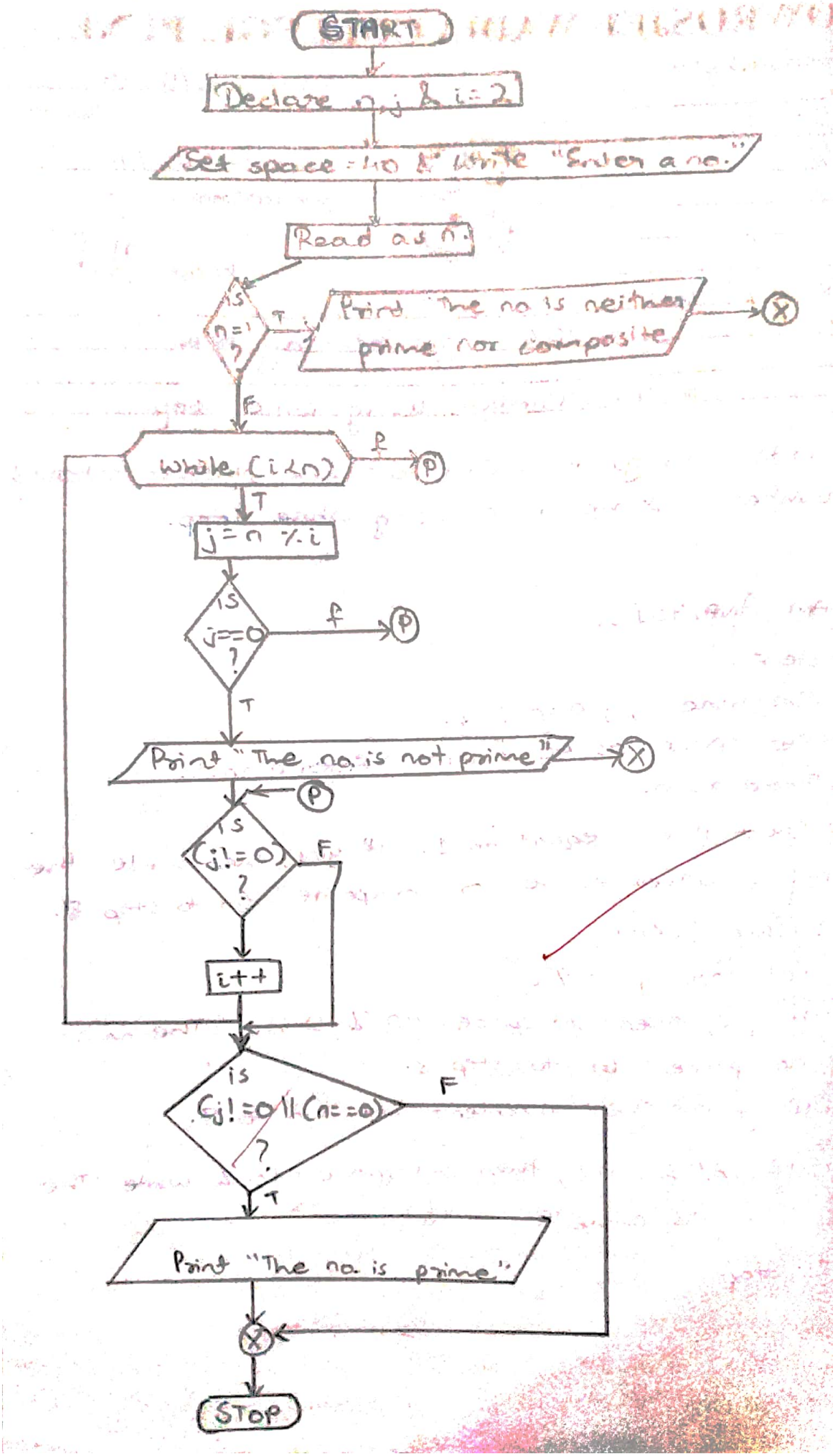
If j=0, then set space= 40 & write "The no. is not prime". Go to step 8.

If j≠ 0, then increment i++. Go to 8.

Step 7: If j≠0 & n=2, then set space =40 & write "The no. is prime".

Step 8: Stop.

FLOWCHART: -



NTINUO.CPP

PRIME.CPP

```
//program peroformed by roll no.7016
//implementation of while loop for checking wether the entered no. is prime or not

#include<iostream.h>
#include<conio.h>
#include<iomanip.h>
#include<stdlib.h>
void main()
{
clrscr();
int n,j,i=2;
cout<<setw(40)<<"enter a no.";
cin>>n;
if(n==1)
 {
 cout<<setw(40)<<"the no. is neither prime nor composite"<<endl;
 getch();
 exit(0);
 }
 while(i<n)
 {
 j=n%i;
 if(j==0)
 cout<<setw(40)<<"the no. is not prime"<<endl;
 getch();
 exit(0);
 }
 if(j!=0)
 {
 i++;
 }
 {
 if((j!=0)||(n==2))
 cout<<setw(40)<<"the no is prime"<<endl;
 }
 getch();
}
```

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Experiment Incomplete For

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Experiment Complete C

Incharge

Name VRUSHIL SONI.

Class XI Roll No. 7016 Batch Saturday. Pair No. -

Expt. No. _____ Title Implementation of While Loop to display fibonacci series.

AIM: Write a program in C++ using while loop to display fibonacci series upto 'n' terms.

Program Analysis:-

Step 1: Start.

Step 2: Delare a=0, b=1, c=0, i=1 & n.

Step 3: Write "enter the no. of terms in the series".

Step 4: Read as n.

Step 5: Print values of a & b.

Step 6: while (i<=n)

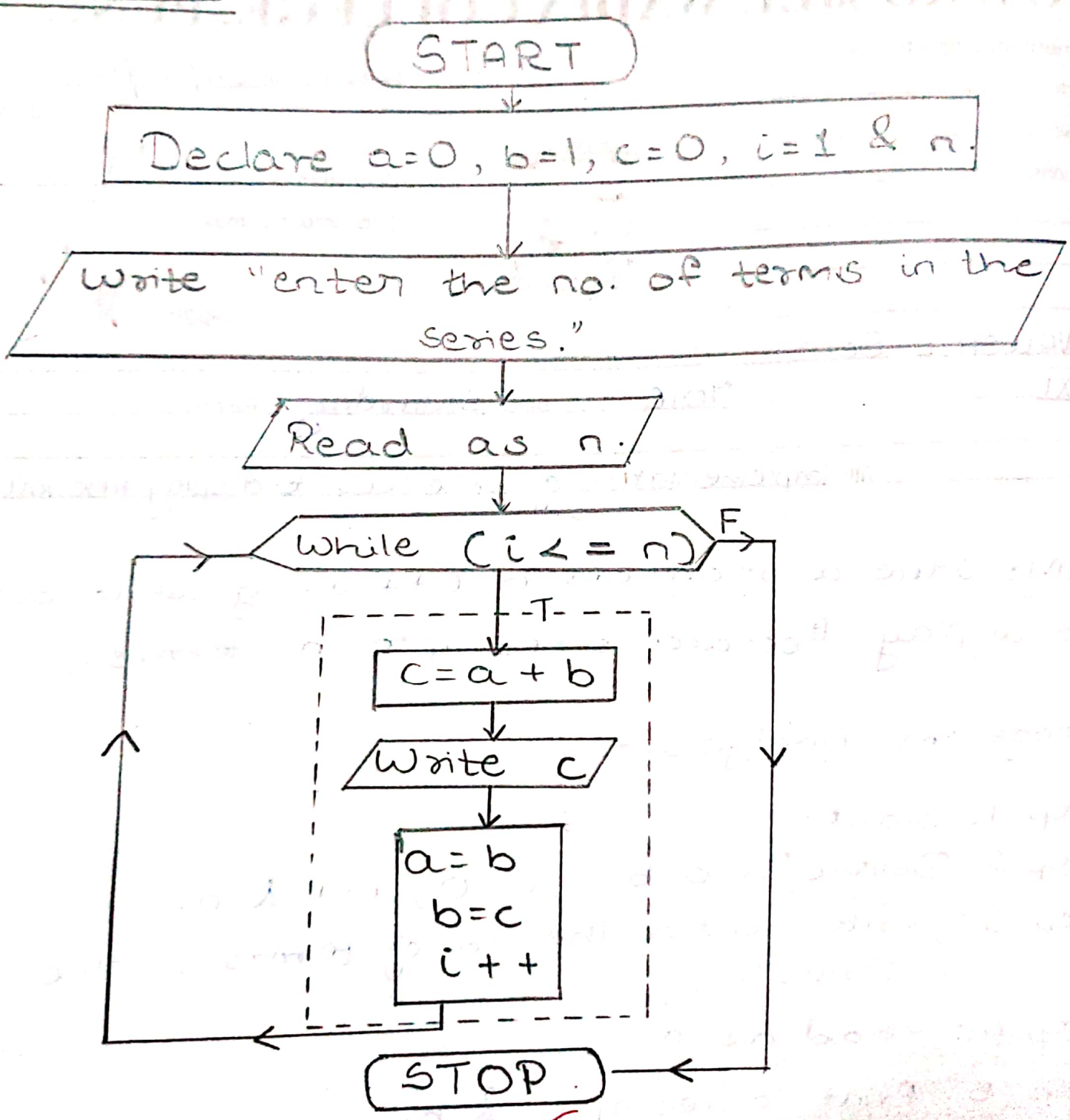
Calculate c=a+b

Print c.

Interchange values as a=b; b=c & increment value of i.

Step 7: Stop.

Flowchart :-



WHILELOO

```
//Program done by 7016
// fibonacci series

#include<iostream.h>
#include<conio.h>
void main()
{
clrscr();
int a=0,b=1,c=0,i=1,n; //declaring variables
cout<<"enter the no. of terms in the series"<<endl;
cin>>n;
cout<<a<<" "<<b;
while(i<=n)
{
c=a+b;
cout<<" "<<c;
a=b;
b=c;
i++;
}
getch();
}
/*enter the no. of terms in the series
5
0 1 1 2 3 5 8*/
```

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Experiment Complete C

Incharge

Name VRUSHIL SONI.

Class XI. Roll No. 7016 Batch Saturday Pair No. _____

Expt. No. _____ Title Implementation of Continue Statement.

AIM: Write a program in C++ to implement continue statement by taking dividend & divisor as input & printing the quotient & remainder.

PROGRAM ANALYSIS:-

STEP 1: Start.

STEP 2: Declare variables as div, divisor, quo & rema.

STEP 3: Using a do loop, set space = 40 & print "Enter the divisor".

STEP 4: Read as divisor.

STEP 5: Set space = 40 & write "Enter the dividend".

STEP 6: Read as div.

STEP 7: Check if (div==0). If yes, then set space = 40 & print "Enter non-zero dividend" & then go to step 3.

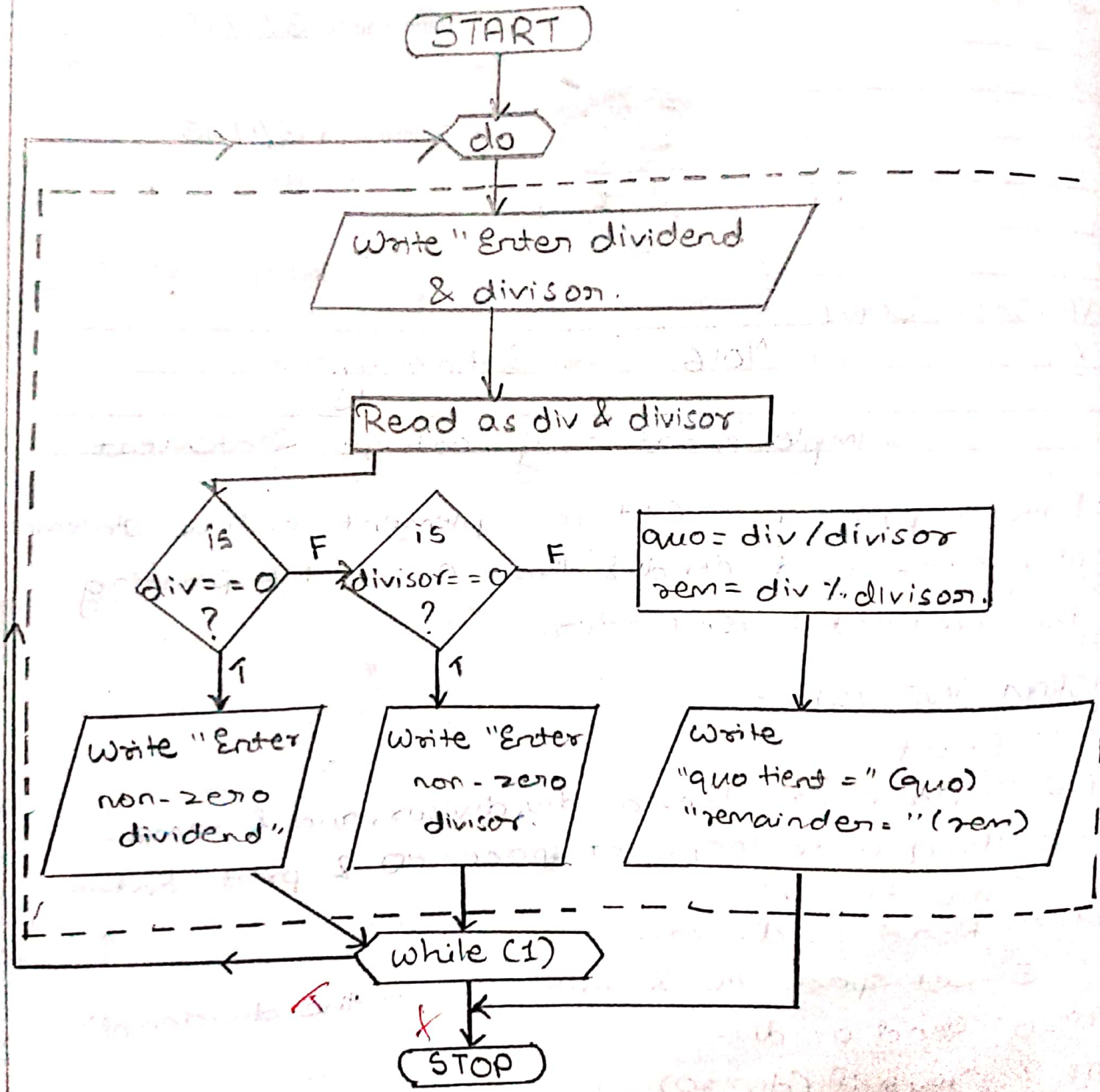
STEP 8: Check if (divisor==0). If yes, then set space = 40 & print "Please enter non-zero divisor" & then go to step 3.

STEP 9: Calculate quo = div / divisor.
Calculate rem = div % divisor.

STEP 10: Print "the quotient is" (quo).
Print "the remainder is" (rem).

STEP 11: STOP.

FLOWCHART :-



CONTINUO.CPP

```
//program performed by 7016
//program to implement continue statement
#include<iostream.h>
#include<conio.h>
#include<iomanip.h>
void main()
{
 clrscr();
 int div, divisor, quo, rem;
 do
 {
  cout<<setw(40)<<"enter the divisor"<<endl;
  cin>>divisor;
  cout<<setw(40)<<"enter the divident"<<endl;
  cin>>div;
  if(div==0)
  {
   cout<<setw(40)<<"please enter non zero dividend"<<endl;
   continue;
  }
  if(divisor==0)
  {
   cout<<setw(40)<<"enter a non zero divisor"<<endl;
   continue;
  }
  quo=div/divisor;
  rem=div%divisor;
  cout<<"the quotient is"<<quo<<endl;
  cout<<"the remainder is"<<rem<<endl;
  break;
 }while(1);
 getch();
}/*                      enter the divisor
0
                        enter the divident
0
          please enter non zero dividend
                        enter the divisor


2
                        enter the divident
4
the quotient is2
the remainder is0*/
```

NOWROSJEE WADIA COLLEGE, PUNE

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Experiment Complete

Incharge

Name VRUSHIL SONI.

Class XI Roll No. 7016 Batch Saturday. Pair No. _____

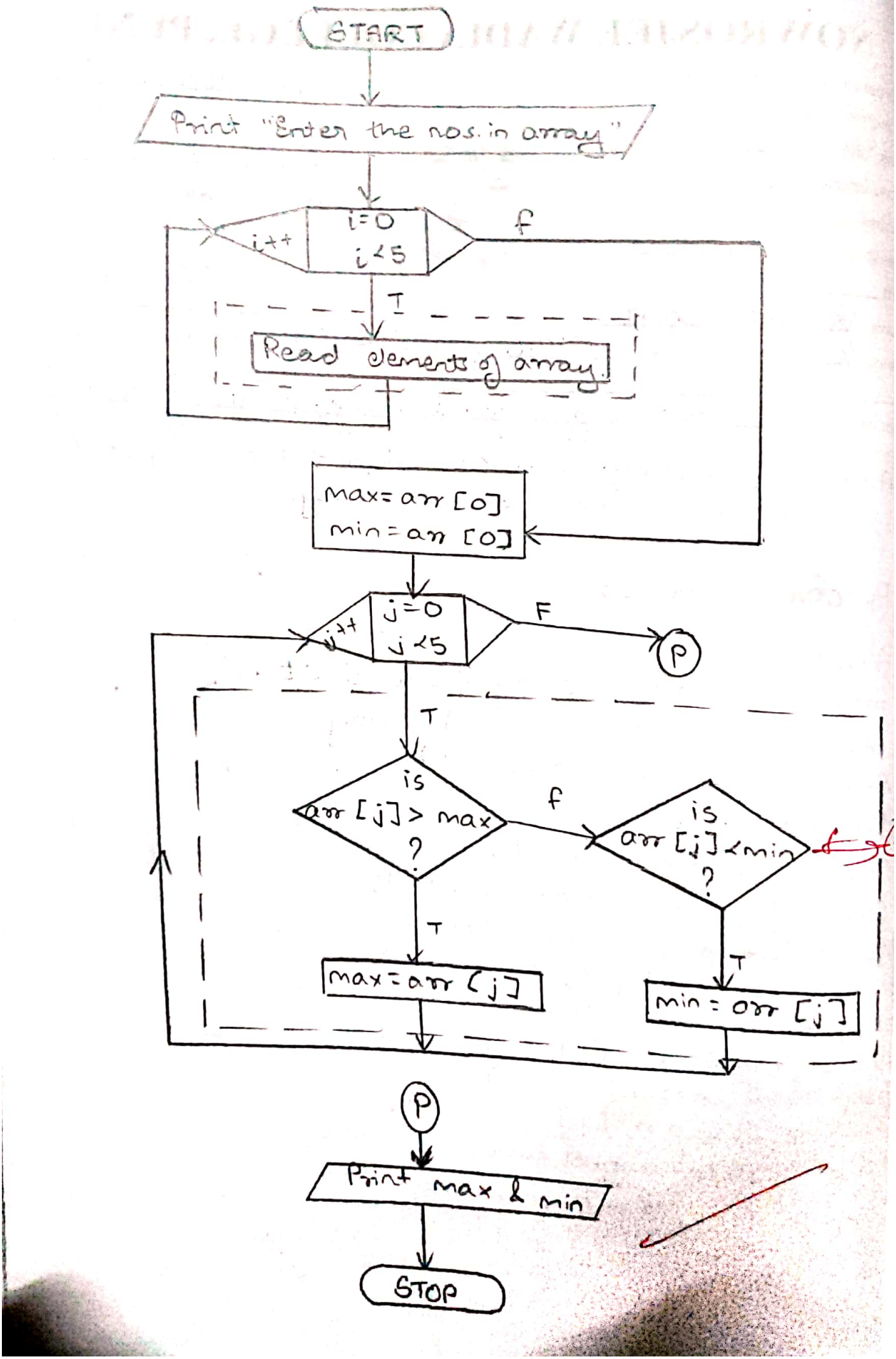
Expt. No. _____ Title Finding largest & smallest no. using array.

AIM: Write a program in C++ to print the largest & the smallest no. from an array.

PROGRAM ANALYSIS:-

Step 1: Start.
Step 2: Declaration of array of size 5 & t.
Step 3: Print "Enter numbers in array".
Step 4: For (int i=0; i<5; i++)
Step 5: Read t.
Step 6: Assign arr[i]=t;
Step 7: Declare int max=arr[0];
Step 8: Declare int min=arr[0].
Step 9: for (int j=0; j<5; i++)
Step 10: if (arr[j]>max)
max=arr[j]
Step 11: if (arr[j]<min)
min=arr[j]
Step 12: Print "largest number =" max.
Step 13: Print "smallest number=" min.
Step 14: Stop.

FLOWCHART:-



PALINDRO.CPP

PRACTICA.CPP

```
//program performed by 7016
//program to find largest and smallest no. using an array
#include<iostream.h>
#include<conio.h>
#include<iomanip.h>
void main()
{
clrscr();
int arr[5],t;
cout<<setw(40)<<"enter the nos in array"<<endl;
for(int i=0;i<5;i++)
{
cin>>t;
arr[i]=t;
}
int max=arr[0];
int min=arr[0];
for(int j=0;j<5;j++)
{
if(arr[j]>max)
max=arr[j];
if(arr[j]<min)
min=arr[j];
}
cout<<setw(40)<<"the largest no ="<<max<<endl;
cout<<setw(40)<<"the smallest no="<<min<<endl;
getch();
}
/*                enter the nos in array
1

66

55

94

35

                        the largest no =94

                        the smallest no=1 */
```

NOWROSJEE WADIA COLLEGE, PUNE

Experiment Incomplete For

Diagram _____

Obs. Table _____

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Experiment Complete

Incharge

Name VRUSHTI SONI.

Class XI Roll No. 7016 Batch Saturday Pair No. _____

Expt. No. _____ Title 2-D array initialization & implementation.

Aim: W.a.p. in C++ using 2-D array concept to print the months.

Program Analysis-

Step 1: Start.

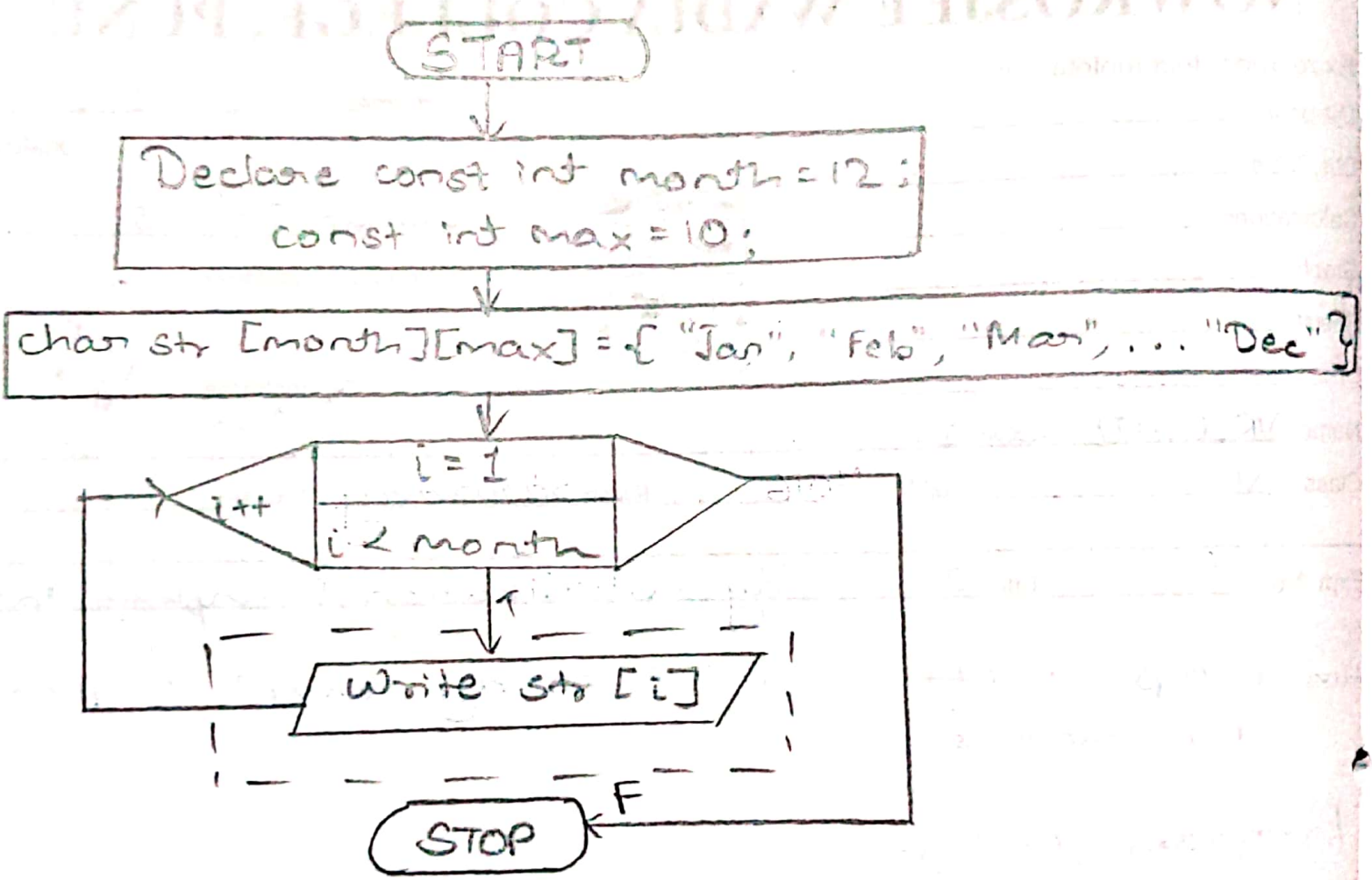
Step 2: Declare constant integer value for month & max.

Step 3: Initialize 2-D array char str [month] [max] = {"Jan", "feb", "mar", "apr", "may", "June", "July", "aug", "sept", "oct", "nov", "dec"}

Step 4: Create a for loop & print str [i].

Step 5: Stop.

Flowchart :-



ZDARRAY.CPP

```
//program performed by 7016
//program for 2d array initialization
#include<iostream.h>
#include<conio.h>
#include<iomanip.h>
const int month=12;
const int max=10;
void main()
{
 clrscr();
 char str
[month][max]={"january","february","march","april","may","june","july","august","sep
tember","october","november","december"};
 for(int i=0;i<month;i++)
 {
  cout<<setw(40)<<str[i]<<endl;
 }
 getch();
}
/*                                      january
                                       february
                                          march
                                          april
                                            may
                                           june
                                           july
                                         august
                                      september
                                        october
                                       november
                                       december*/
```

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Diagram _____

Obs. Table _____

Calculations _____

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Unit _____

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Signature

Submitted On 27/12/14.

Experiment Complete C

Incharge

Name VRUSHIL SONI.

Class XI. Roll No. 7016 Batch Saturday. Pair No. _____

Expt. No. _____ Title Implementation of Switch Case using Enumerated data.

AIM: Write a program in C++ to perform the operations addition, subtraction, multiplication, division, modulus, square & square root using switch case.

PROGRAM ANALYSIS:-

Step 1: Start.

Step 2: Declare enumerated operation

```
{
add=1, sub, mul, div, mod, sqr, sqrtt.
}
```

Step 3: Declare variables a, b, c as int, f as float & ch as char.

Step 4: Using a do loop, print these statements.

"Press 1 for addition".

"Press 2 for subtraction".

"Press 3 for ~~subtraction~~ Multiplication".

"Press 4 for division".

"Press 5 for Modulus".

"Press 6 for square".

"Press 7 for square root".

"enter your choice".

Step 5: Read as c.

Step 6: If c==1,

Print "enter 2 nos"

Read as a and b.

Addition is (a+b).
Print "addition: " (a+b)
Go to step no 14.

Step 7: If c==2,
Print "enter 2 nos"
Read as a & b.
Subtraction = " (a-b)
Go to step 14.

Step 8: If c==3,
Print "enter 2 nos".
Read as a & b.
Multiplication is a * b.
Print "Multiplication" (a * b).
Go to step 14.

Step 9: If c==4,
Print "enter 2 nos".
Read as a & b.
division is a/b.
Print "division = " (a/b)
Go to step 14.

Step 10: If c==5, then
Print "Enter 2 nos".
Read as a & b.
The modulus is (a%.b
Print "Modulus = " (a%.b)
goto step 14.

Step 11: If c==6
Print "Enter a no".
Read as a.
The sqr is (a*a).
Print "sqr :" (a*a)
And go to step 14.

Step 12: If c==7
Print "Enter a no"
Read as a.
The sqrt is sqrt (a)

Print "sqrt ="
go to step 14.

Step 13: Default Print "Invalid input" & go to Step 14.

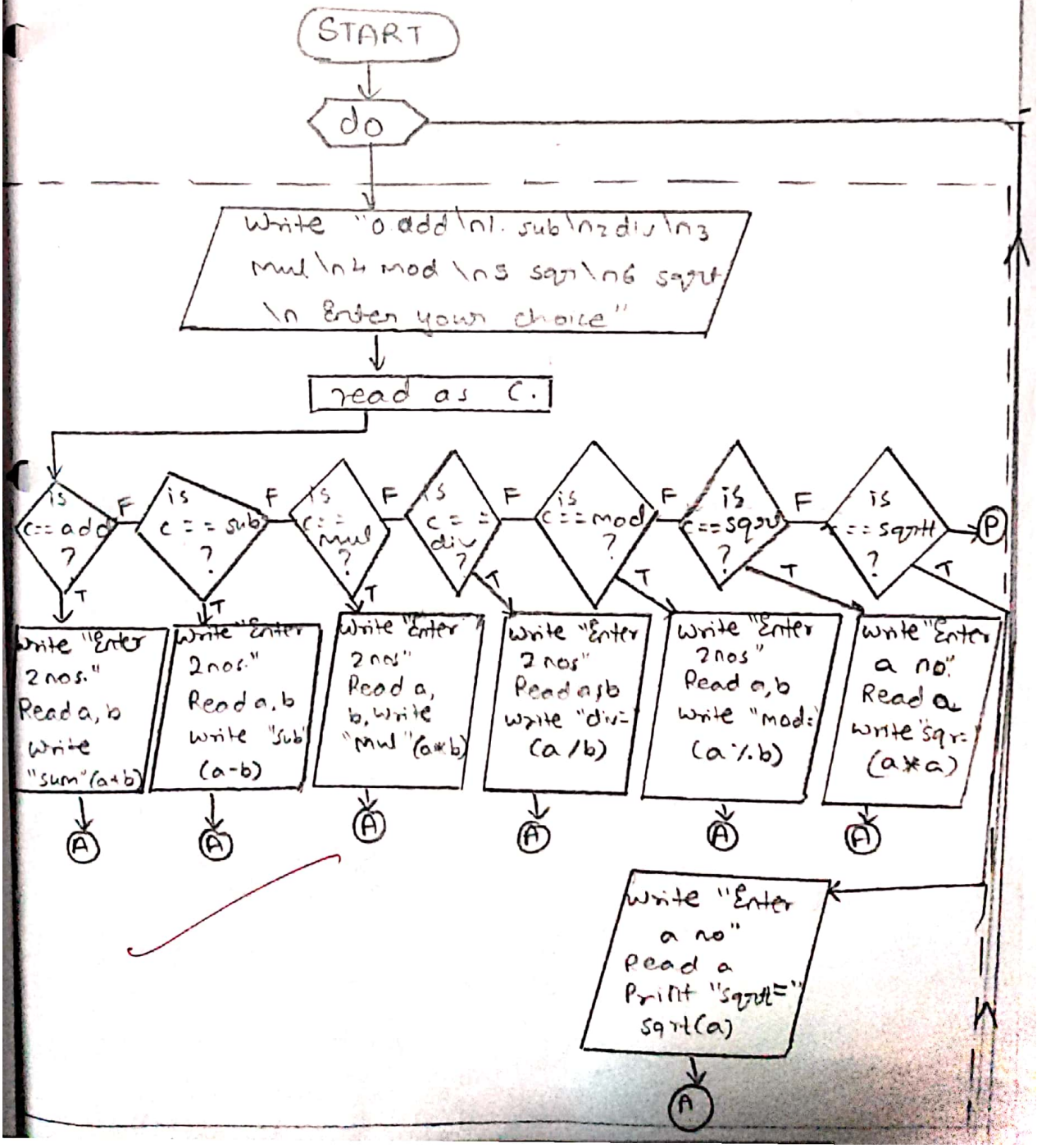
Step 14. Print "Do you wish to continue (Y/n)".

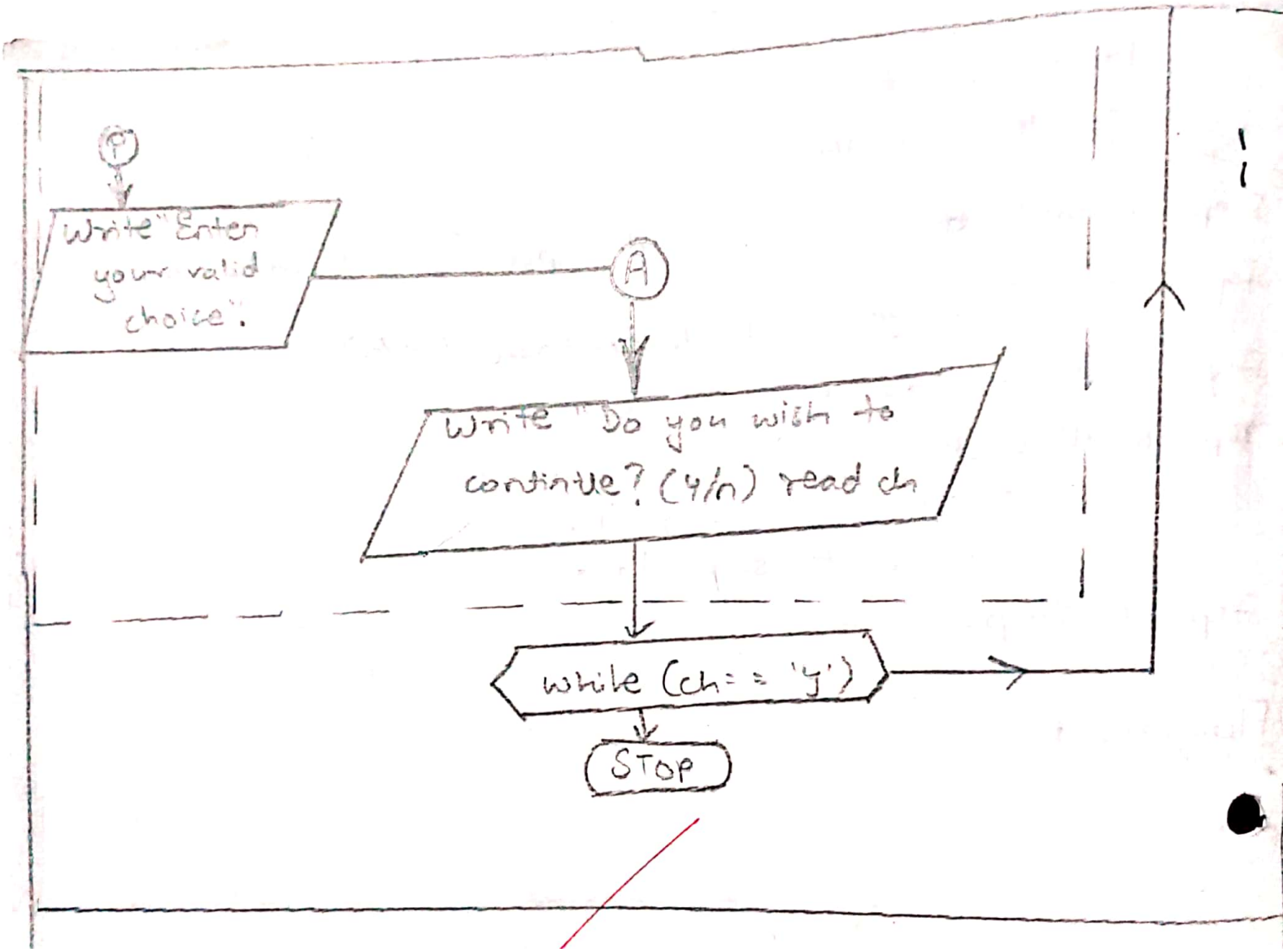
Step 15: Read as ch.

Step 16: If (ch == 'Y')
then go to Step 4.
else go to step 17.

Step 17: Stop.

Flowchart:-





SWITCH.CPP

```
//program performed by 7016
//program to implement switch case with enumerated data type
#include<iostream.h>
#include<conio.h>
#include<iomanip.h>
#include<math.h>
void main()
{
 enum operation
  {
  add=1,sub,mul,div,mod,sqr,sqrtt
  };
  clrscr();
  int a,b,c;
  float f;
  char ch;
  do
  {
   cout<<"press 1 for addition"<<endl;
   cout<<"press 2 for subtraction"<<endl;
   cout<<"press 3 for multiplication"<<endl;
   cout<<"press 4 for division"<<endl;
   cout<<"press 5 for modulus"<<endl;
   cout<<"press 6 for square"<<endl;
   cout<<"press 7 for square root"<<endl;
   cout<<"enter your choice"<<endl;
   cin>>c;
   switch (c)
   {
    case add:
     cout<<setw(40)<<"enter 2 nos"<<endl;
     cin>>a>>b;
     cout<<setw(40)<<"addition="<<(a+b)<<endl;
     break;
    case sub:
     cout<<setw(40)<<"enter 2 nos"<<endl;
     cin>>a>>b;
     cout<<setw(40)<<"subtraction="<<(a-b)<<endl;
     break;
   case mul:
    cout<<setw(40)<<"enter the 2 nos"<<endl;
    cin>>a>>b;
    cout<<setw(40)<<"multiplication="<<(a*b)<<endl;
    break;
  case div:
   cout<<setw(40)<<"enter 2 nos"<<endl;
   cin>>a>>b;
   cout<<setw(40)<<"division="<<(a/b)<<endl;
   break;
  case mod:
   cout<<setw(40)<<"enter 2 nos"<<endl;
   cin>>a>>b;
```

```
      cout<<setw(40)<<"modulus="<<(a%b)<<endl;
      break;
     case sqr:
      cout<<setw(40)<<"enter the no"<<endl;
      cin>>a;
      cout<<setw(40)<<"square="<<(a*a)<<endl;
      break;
     case sqrtt:
      cout<<setw(40)<<"enter the no"<<endl;
      cin>>a;
      f=sqrt(a);
      cout<<setw(40)<<"square root="<<f<<endl;
      break;
     default:
      cout<<setw(40)<<"invald choice"<<endl;
      break;
    }//switch closes here
    cout<<"do you want to continue?(y/n)";
    cin>>ch;
   }while ((ch=='y')||(ch=='y'));
   getch();
  }
  /*press 1 for addition
press 2 for subtraction

press 3 for multiplication

press 4 for division

press 5 for modulus

press 6 for square

press 7 for square root

enter your choice

1

                                enter 2 nos

5 2

                                  addition=7

do you want to continue?(y/n)n*/
/*press 1 for addition
press 2 for subtraction

press 3 for multiplication

press 4 for division
```



```
press 5 for modulus

press 6 for square

press 7 for square root

enter your choice

8

                            invald choice

do you want to continue?(y/n)n */
```

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Submitted On 18/02/15.

Experiment Complete

Incharge

Name VRUSHIL SONI.

Class FYI Roll No. 7016 Batch Saturday Pair No. _____

Expt. No. _____ Title Implementation of Multiple Function.

Aim: Write a program in C++ using function concept in which it creates 5 different function i.e. addition, substraction, multiplication, division, modulus which print their respective output using switch case.

PROGRAM analysis:-

Step 1: Start.

Step 2: Start int add (int a, int b)
return (a+b)
end add.

Step 3: Start int sub (int a, int b)
return (a-b)
end ~~add~~ sub.

Step 4: Start int mul (int a, int b)
return (a * b)
end mul.

Step 5: Start int div (int a, int b)
return (a/b)
end div.

Step 6: Start int mod (int a, int b)
return (a%b)
end mod.

Step 7: If n==1, then
print ("Enter the nos") a, b
print ("The sum is") add (a, b)
& go to step 12.

Step 8: If (n==2) then
print ("Enter the nos") a,b.
print ("the difference is") sub(a-b)
& go to step 12.

Step 9: If (n==3) then
print ("Enter the nos") a,b)
print ("the product is") mul (a * b)
& go to step 12.

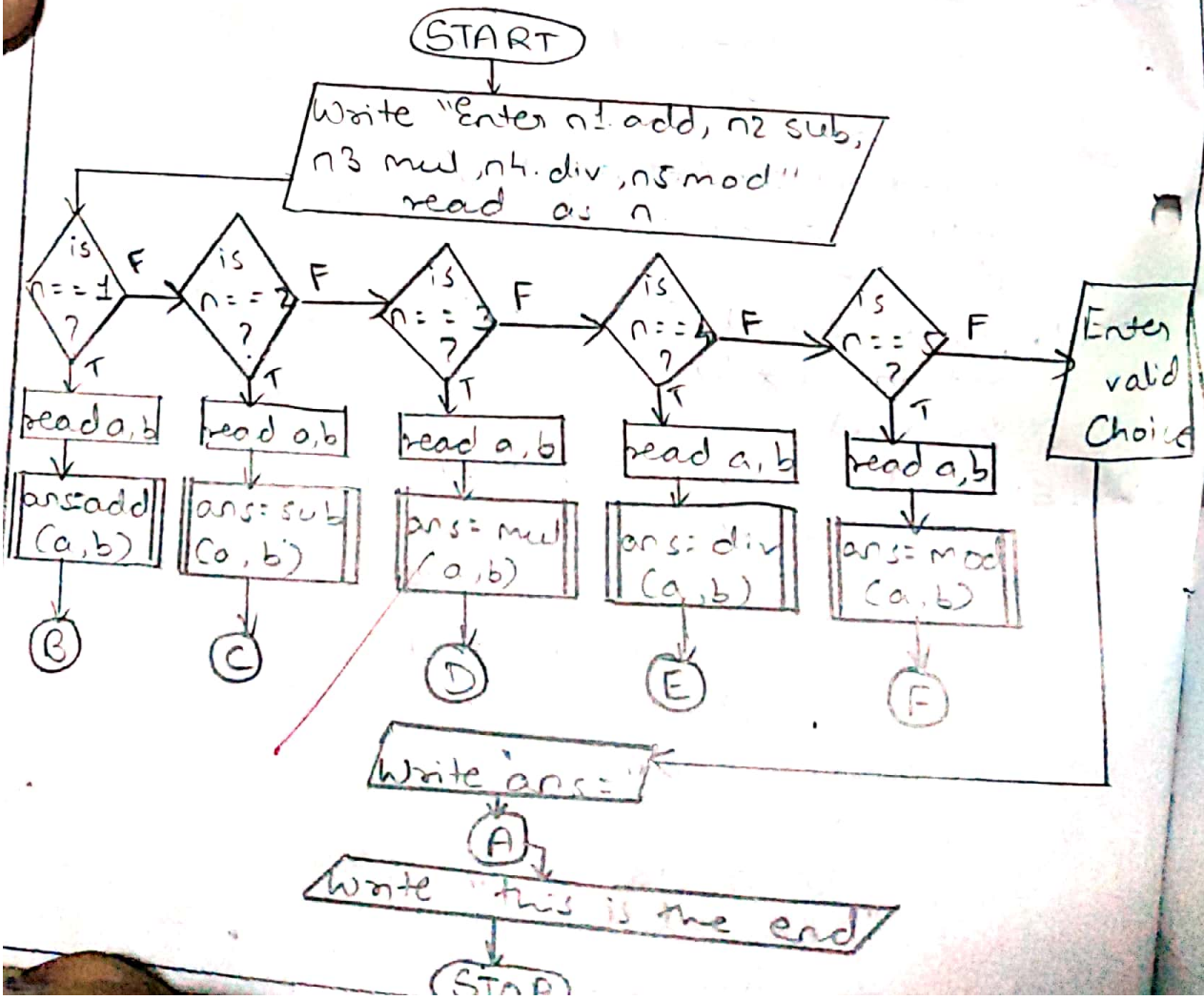
Step 10: If (n==4) then
print ("Enter the nos") a,b
print ("the division is") div (a,b)
& go to step 12.

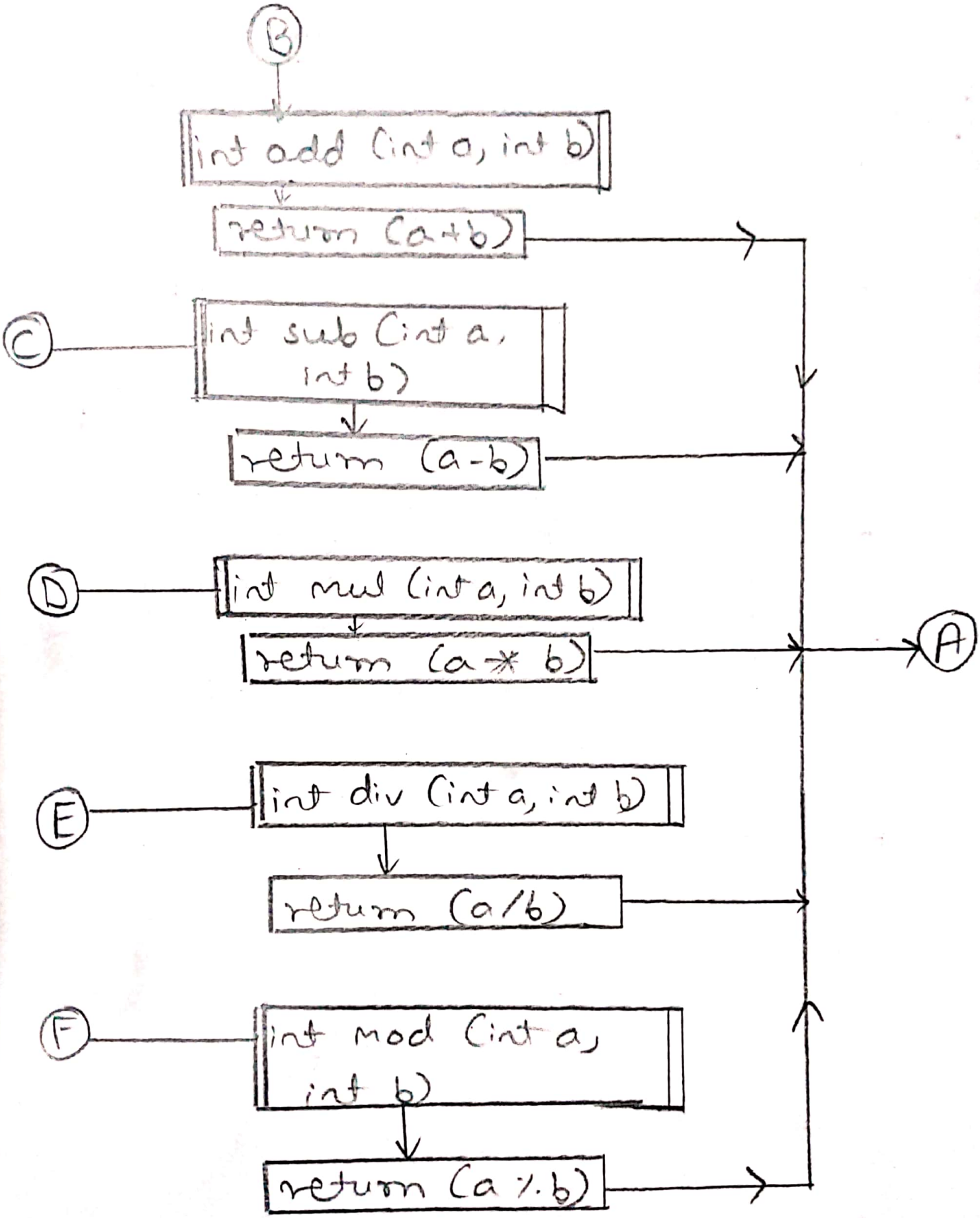
Step 11: If (n==5) then
print ("Enter the nos") a,b)
print ("the mod is") mod (a,b)
& go to step 12.

Step 12: Print ("this is the end")

Step 13: Stop.

Flowchart:-





```
//program performed by 7016
//program to implement 5 different functions
#include<iostream.h>
#include<conio.h>
#include<iomanip.h>
int add (int a,int b)
{
 return(a+b);
}
int sub(int a, int b)
{
 return(a-b);
}
int mul(int a, int b)
{
 return (a*b);
}
int div(int a, int b)
{
 return(a/b);
}
int mod(int a, int b)
{
 return (a%b);
}
void main()
{
 int n, a, b, ans;
 cout<<setw(40)<<"press 1 for addition"<<endl;
 cout<<setw(40)<<"press 2 for subtraction"<<endl;
 cout<<setw(40)<<"press 3 for multiplication"<<endl;
 cout<<setw(40)<<"press 4 for division"<<endl;
 cout<<setw(40)<<"press 5 for mod"<<endl;
 cout<<setw(40)<<"enter your choice"<<endl;
 cin>>n;
 switch(n)
 {
  case 1:
  cout<<setw(40)<<"enter 2 nos"<<endl;
  cin>>a>>b;
  ans=add(a,b);
  cout<<setw(40)<<"addition="<<ans<<endl;
  break;
  case 2:
  cout<<setw(40)<<"enter 2 nos"<<endl;
  cin>>a>>b;
  ans=sub(a,b);
  cout<<setw(40)<<"subtraction="<<ans<<endl;
  break;
  case 3:
  cout<<setw(40)<<"enter 2 nos"<<endl;
  cin>>a>>b;
  ans=mul(a,b);
  cout<<setw(40)<<"multiplication="<<ans<<endl;
  break;
  case 4:
  cout<<setw(40)<<"enter 2 nos"<<endl;
  cin>>a>>b;
  ans=div(a,b);
  cout<<setw(40)<<"division="<<ans<<endl;
  break;
  case 5:
```

FUNC.CPP

```
 cout<<setw(40)<<"enter 2 nos"<<endl;
 cin>>a>>b;
 ans=mod(a,b);
 cout<<setw(40)<<"modulus="<<ans<<endl;
 break;
 default: cout<<setw(40)<<"invalid choice"<<endl;
 break;
 }
 getch();
}
/*                    press 1 for addition
                   press 2 for subtraction
                press 3 for multiplication
                   press 4 for division
                        press 5 for mod
                      enter your choice
1                                enter 2 nos
5 4                                addition=9*/
```

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Experiment Incomplete For

Diagram _____

Obs. Table _____

Calculations _____

Graphs _____

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Signature

Submitted On 18/02/15.

Experiment Complete

Incharge

Name VRUSHIL SONI.

Class XI Roll No. 7016. Batch Saturday. Pair No. _____

Expt. No. _____ Title Implementation of inline function.

Aim: Write a program in C++ which calculates areas of shapes circle, triangle, square & rectangle using inline function concept.

Program analysis:-

Step 1: Start inline double circle (double r)

Step 2: return (3.14 * r * r)

Step 3: End.

Step 4: Start inline double square (double s)

Step 5: return (s * s)

Step 6: End.

Step 7: Start inline double triangle (double b, double h)

Step 8: return (0.5 * b * h)

Step 9: End.

Step 10: Start inline double rectangle (double l, double b)

Step 11: return (l * b)

Step 12: End.

Step 13: Start main()

Step 14: Print ("Enter 0 for exit")

Step 15: Print ("1. Circle \n 2. triangle \n 3. square. \n rectangle")

Step 16: input n.

Step 17: If n==1 then
print ("Enter the radius")
Input radius.
Print ("area" circle(radius))

Step 18: If n==2,
then:
Print ("Enter b & h")
input b & h.
Print ("area", triangle (b, h))

Step 19: If n==3, then
print ("Enter the side")
input side.
print ("area", square (side))

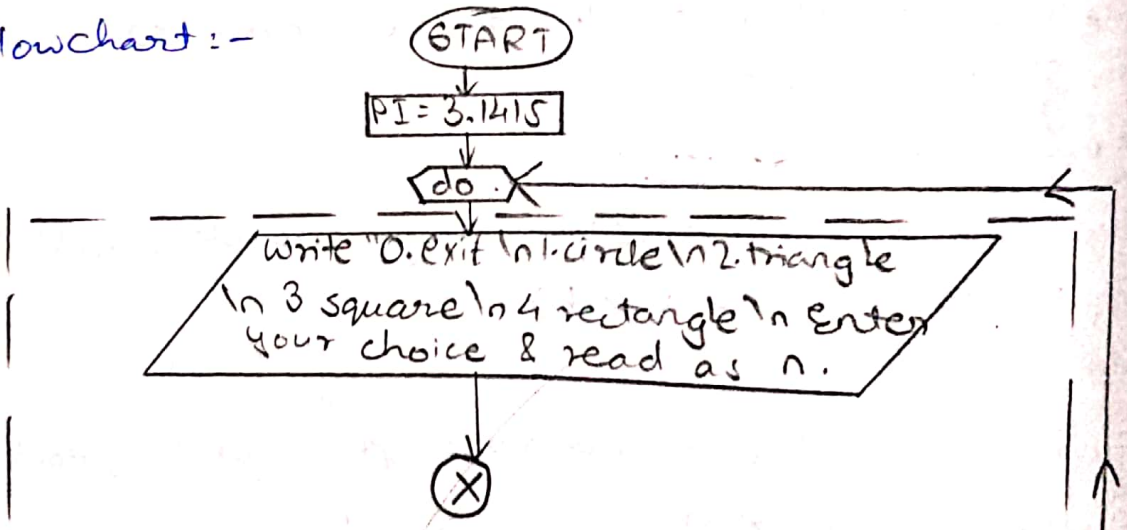
Step 20: If n==4, then,
print ("Enter l & b")
Input l & b.
print ("area", rectangle (l, b)

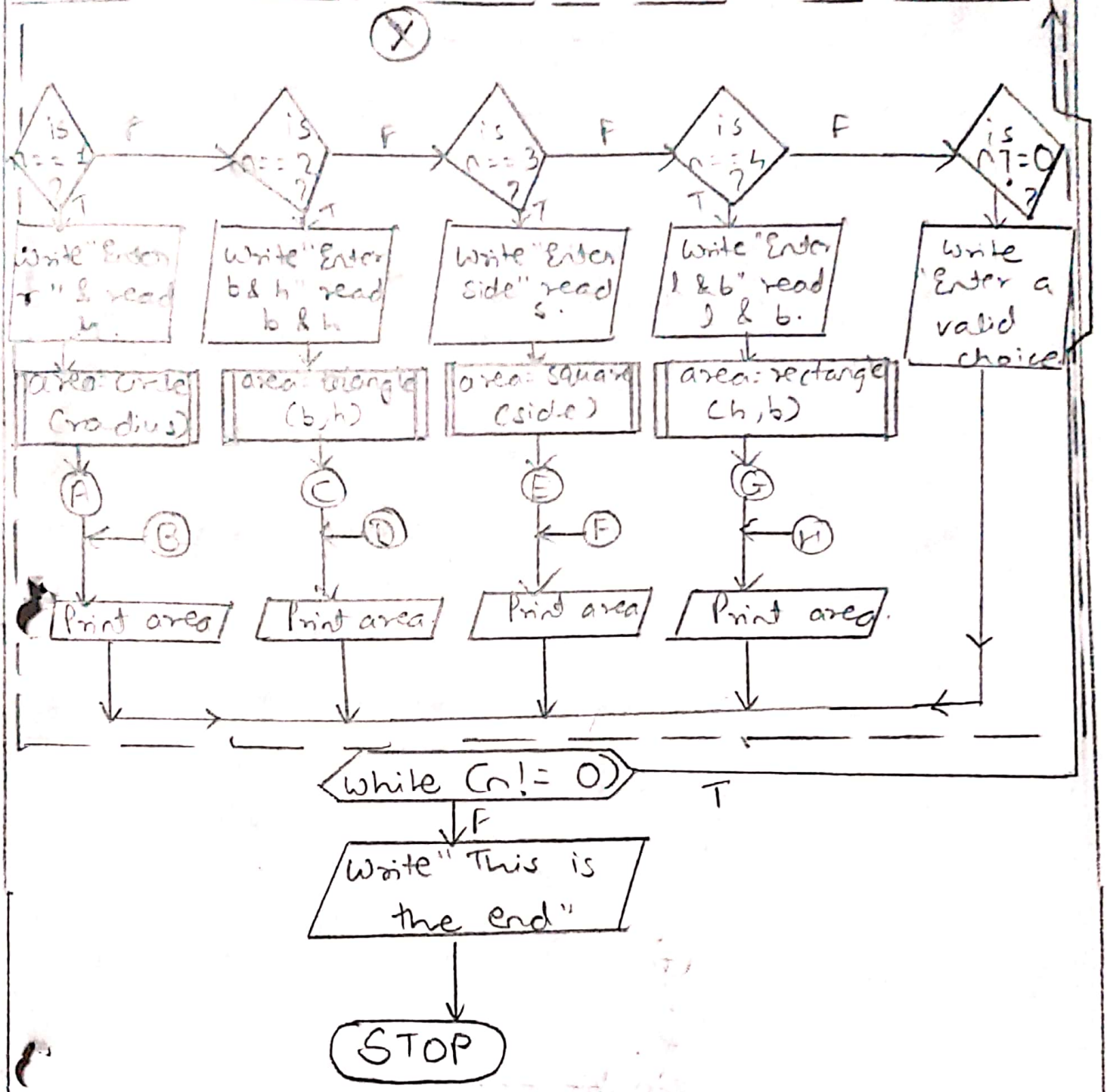
Step 21: If n!=0, go to step 15.

Step 22: Print "this is the end".

Step 23: Stop.

Flowchart :-





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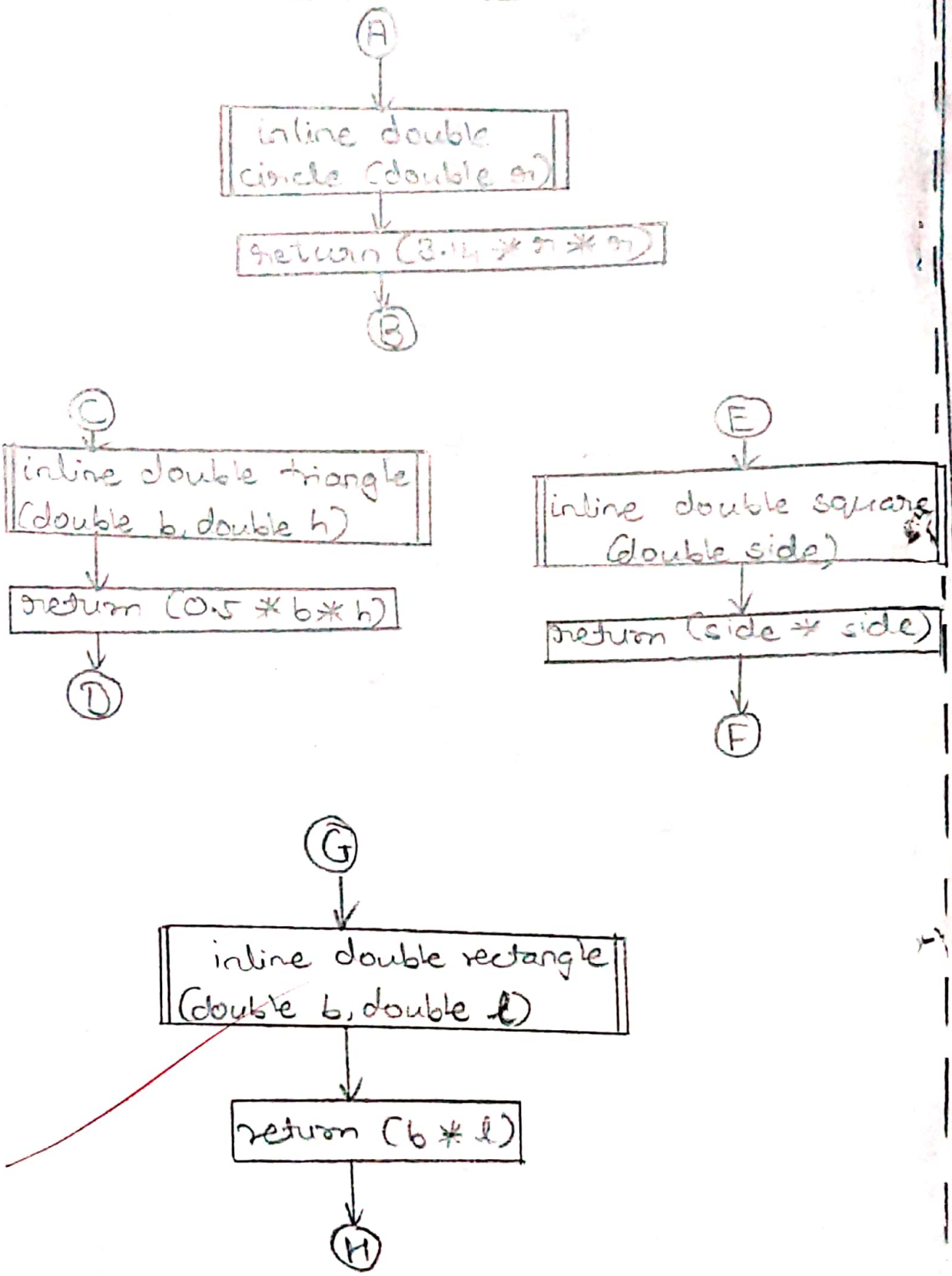

```
//program performed by 7016
//program to implement inline function
#include<iostream.h>
#include<conio.h>
#include<iomanip.h>
#include<process.h>
#define pi 3.14
inline double circle(double r)
{
 return(pi*r*r);
}
inline double triangle(double b, double h)
{
 return(0.5*b*h);
}
inline double square(double s)
{
 return(s*s);
}
inline double rectangle(double l, double b)
{
 return(l*b);
}
void main()
{
 clrscr();
double area, l, b, base, h, r, s;
int n;
do
{
 cout<<setw(40)<<"press 1 for circle"<<endl;
 cout<<setw(40)<<"press 2 for triangle"<<endl;
 cout<<setw(40)<<"press 3 for square"<<endl;
 cout<<setw(40)<<"press 4 for rectangle"<<endl;
 cout<<setw(40)<<"enter your choice"<<endl;
 cin>>n;
 if(n==1)
 {
 cout<<setw(40)<<"enter radius"<<endl;
 cin>>r;
 area=circle(r);
 cout<<setw(40)<<"area of circle="<<area<<endl;
 }
 else if (n==2)
 {
 cout<<setw(40)<<"enter b and h"<<endl;
 cin>>b>>h;
 area=triangle(base,h);
 cout<<setw(40)<<"area of triangle="<<area<<endl;
 }
 else if (n==3)
 {
 cout<<setw(40)<<"enter side"<<endl;
 cin>>s;
 area=square(s);
 cout<<setw(40)<<"area square is"<<area<<endl;
 }
 else if(n==4)
 {
 cout<<setw(40)<<"enter l and b"<<endl;
 cin>>l>>b;
 area=rectangle(l,b);
```

```
cout<<setw(40)<<"area rectangle="<<area<<endl;
}
else if (n!=0)
{
cout<<setw(40)<<"invalid choice"<<endl;

getch();
exit(0);
}
else
break;
} while(n!=0);
getch();
}
/*                    press 1 for circle
                   press 2 for triangle
                     press 3 for square
                  press 4 for rectangle
                      enter your choice
1
                           enter radius
4
                         area of circle=50.24
                     press 1 for circle
                   press 2 for triangle
                     press 3 for square
                  press 4 for rectangle
                      enter your choice
5
                          invalid choice */
```

NOWROSJEE WADIA COLLEGE, PUNE

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Diagram _____

Obs. Table _____

Calculations _____

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Signature

Submitted On 20/12/14.

Experiment Complete C

Incharge

Name VRUSHIL SONI.

Class XI. Roll No. 7016. Batch Saturday. Pair No. _____

Expt. No. _____ Title Program to check Palindrome Number.

AIM: Write a program in C++ to accept a number from user & check whether it is palindrome or not using while loop.

Program Analysis:-

Step 1: Start

Step 2: Declare variables as long n, N, rev=0 & d=0.

Step 3: Print "enter a no.".

Step 4: Read as n.

Step 5: N=n.

Step 6: While (n>0)

Put d= n % 10

Calculate rev= rev X 10+d.

Calculate n=n/10.

Step 7: Print "reverse no. = ".

Step 8: Check whether rev= N or not.

Step 9: If yes, then print "the no. is palindrome".

Step 10: If not, then print "the no. is not palindrome".

Step 11: Stop.

Flowchart -

NESTINGE.CPP

PALINDRO.CPP

```
//program performed by 7016
//program to check whether given no.is palindrome or not
#include<iostream.h>
#include<conio.h>
void main()
{
 clrscr();
 long n, N, rev=0, d=0;
 cout<<"enter a no."<<endl;
 cin>>n;
 N=n;
 while(n>0)
 {
  d=n%10;
  rev=rev*10+d;
  n=n/10;
 }
cout<<"reverse no. ="<<rev<<endl;
if(rev==N)
 {
 cout<<"the no. is palindrome"<<endl;
 }
else
cout<<"the no. is not palindrome"<<endl;
getch();
}
/*enter a no.
234

reverse no. =432

the no. is not palindrome.

enter a no.
121

reverse no. =121

the no. is palindrome*/
```