Output

* * * Demonstration of various datatypes

Name of student : Abhinav Singh
Address : Mumbai, Miraroad
Roll no. student : 1762
Percentage of student : 78%
Grade of student : A
Mobile no. of student : 7700058710
Student name : Abinav Singh
Student Roll no : 1762
Student Percentage : 78%
Student grade : A
Student Mobile no : 7700058710

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PRACTICAL : 1

Aim - Program to understand the basic datatype and I/O.

Program 1 :-

```
#include <studio.h>
# include <conio.h>
void main()
{
 char name [50];
 char address [50];
 int roll_no ;
 float percent;
 char grade;
 char ch [10];
 clrscr ();
 printf("*** Demonstration of various
          datatype ***");
 printf("\n Name of student :");
 gets( name);
 printf("\n Address :");
 scanf("%s", &add);
 printf("\n Roll no of student:");
 scanf ("%d ,& Roll no");
 Printf(" \n Percentage of student:")
 scanf ("%d + ", ("percent");
```

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```
printf("\n Grade of student:");
scanf("%s", Grade);
printf("\n mobile no:");
scanf("%10s", &mob);
printf("\n student name:%s", name);
printf("\n student address:%s", add);
printf("\n student roll no:%d", roll_no);
printf("\n student percent:%f", percent);
printf("\n student grade:%c", grade);
printf("\n student mobile_no:%10s", m
getch();
```

Program 2:

```
#include<stdio.h>
#include<conio.h>
void main()
{
 int side, area;
 clrscr();
 printf("Enter the side\n");
 scanf("%d", &side);
 area = side * side;
 printf("\n Area of square %d",
                          area);
 getch();
}
```

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OUTPUT

Enter the Side : 5
Area of Square : 25

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OUTPUT:

```
Enter 1st Number : 8
Enter 2nd Number : 6
Addition of 2 numbers : 14
Subtraction of 2 number : 2
Multiplication of 2 number : 48
Division of 2 numbers : 1.3333
```

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PRACTICAL - 2

a) Aim : write a C program which will show the use of various different types of of operators

Arithmatic operators

SOURCE CODE :

```
#include <stdio.h>
#include <conio.h>
  void main()
  {
  int num1, num2, add, sub, mul, div;
  clrscr();
  printf("Enter 1st number:");
  scanf("%d", &num1);
  printf("Enter 2nd number:");
  scanf("%d", &num2);
  add = num1 + num2;
  printf("Addition of 2 number: %d\n"
                        , add);
  sub = num1 - num2;
  printf("Substraction of 2 numbers: %d\n",
                              sub);
  mul = num1 * num2;
  printf("Multiplication of 2 numbers: %d\n",
                              mul);
  div = num1 / num2;
  printf("Division of 2 number: %d", div);
    getch();
}
```

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Logical Operation

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int x, y, z, value1, value2, value3,
  value4, value 5;
  clrscr();
  printf("Enter 1st value:");
  scanf("%d", &x);
  printf("Enter 2nd value:");
  scanf("%d", &y);
  printf("Enter 3rd value:");
  scanf("%d", &z);
  value1 = (x<y) && (z>y);
  printf("value1 is:%d\n", value1);
  value2 = (x=y) && (z<y);
  printf("value2 is:%d\n", value2);
  value3 = (x<y) || (z=y);
  printf("value3 is:%d\n", value3);
  value4 = !(x==y);
  printf("value4 is:%d\n", value4);
  value5 = (x==y);
  printf("value5 is:%d\n", value5);
  getch();
}
```

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OUTPUT :

```
Enter 1st value : 9
Enter 2nd value: 8
Enter 3rd value : 2
value1 : 0
value2 : 1
value3 : 1
value4 : 0
value5 : 1
```

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Ternary Operator

```
#include <conio.h>
#include<stdio.h>
void main()
{
  int a=100, b=20, c=50, big;
  clrscr();
  big=a>b && a>c ? a:b;
  printf("The biggest number is:%d",
                big);
  getch();
}
```

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PRACTICAL-3

Aim: Decision Statements

Write a program to find out odds even number

Step1: Start
Step2: Read a number from user
Step3: Check if number % 2 == 0 then
print even Number
Step4: Exit.

CODE:

```
#include <stdio.h>
#include<conio.h>
 void main()
{
  int n;
  clrscr();
  printf("Enter a number: ");
  scanf("%d", &n);
  if(n%2==0)
  {
    printf("Even number!");
  }
```

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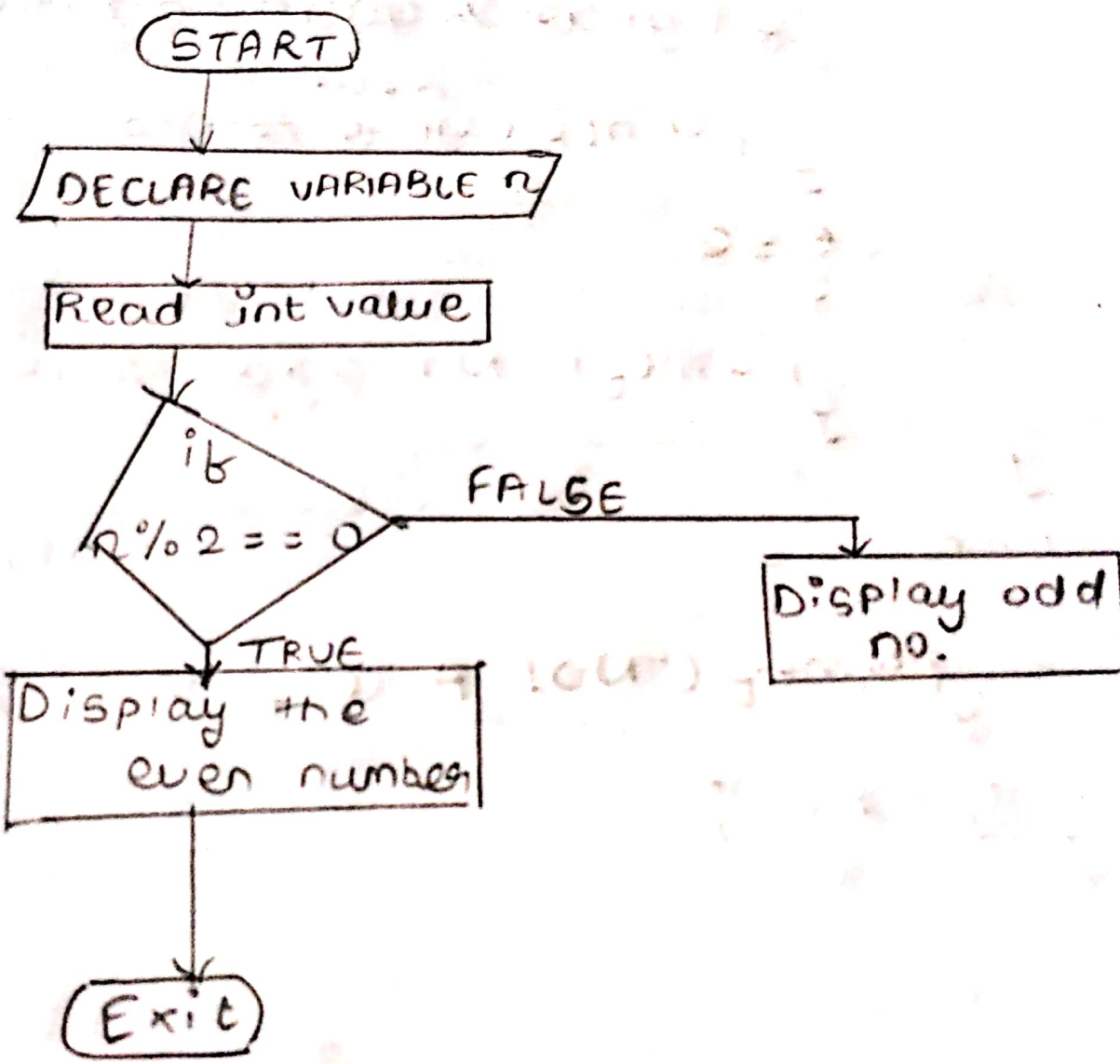
OUTPUT: Enter a number: 26
Even Number

Enter a number: 3
odd Number

low Chart:



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```
else
 {
 printf(" odd numbers:");
 }
 getch();
}
```

WAP to find the entered year is a leap year or not!

ALGORITHM:

Step1: Start
Step2: Read year from the user
Step3: if year%4=0 & year%400==0 or year%4=0 and year%100!=0
print NOT A LEAP YEAR
Step4: Exit.

SOURCE CODE:

```
#include<stdio.h>
#include<conio.h>
 void main()
{
 int year;
 clrscr();
 printf("Enter a year:");
 scanf("%d",&year);
if(year%4==0)
```

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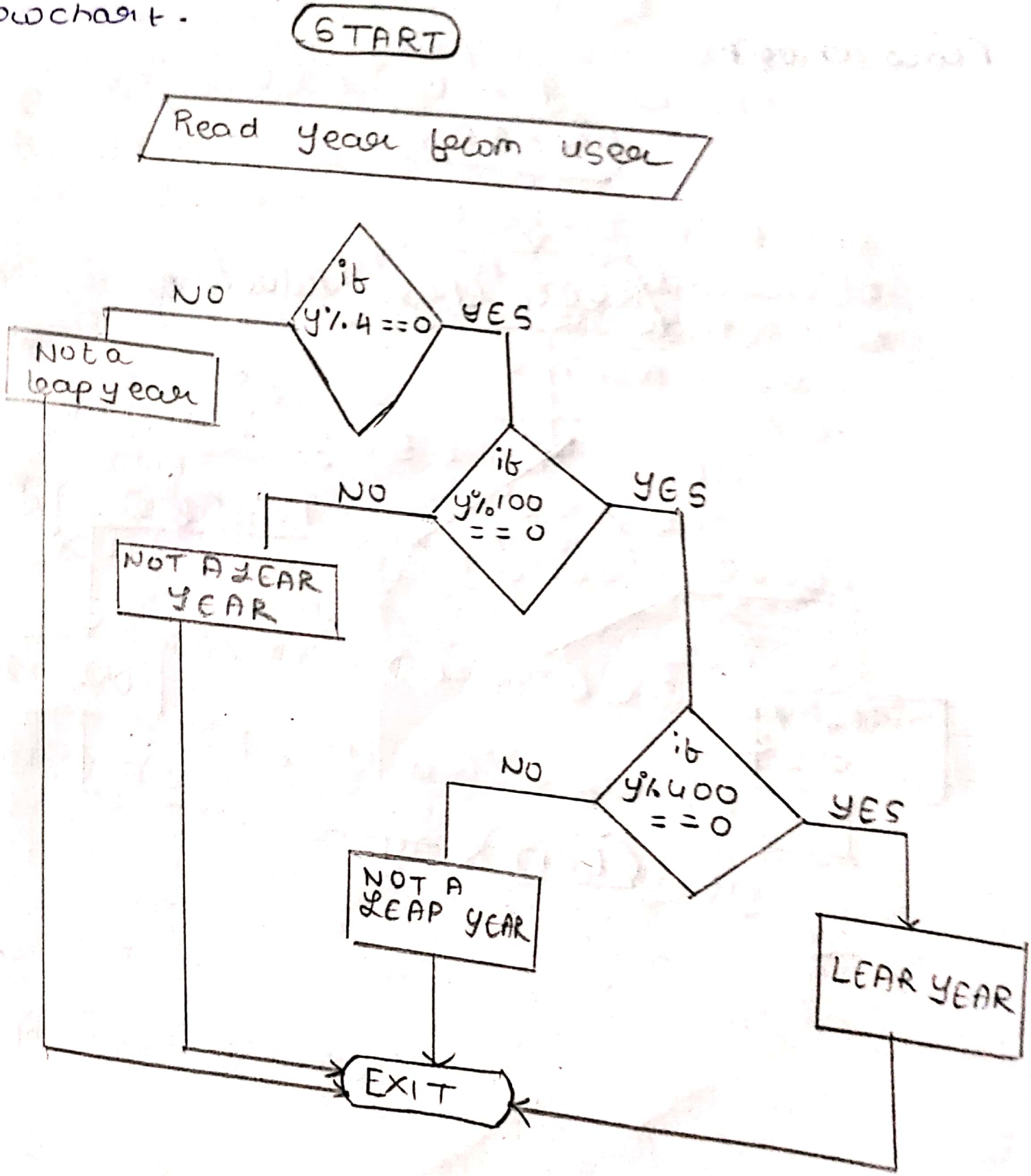
```
if (year % 100 == 0)
    if (year % 400 == 0)
    {
    printf ("Leap year");
    }
    else
    {
    printf ("NOT a leap year");
    }
else
  {
  printf ("NOT A leap year");
  }
getch();
```

OUTPUT : Enter a year : 2017
: NOT a Leap year
Enter a year : 2020
: Leap year

Flowchart.



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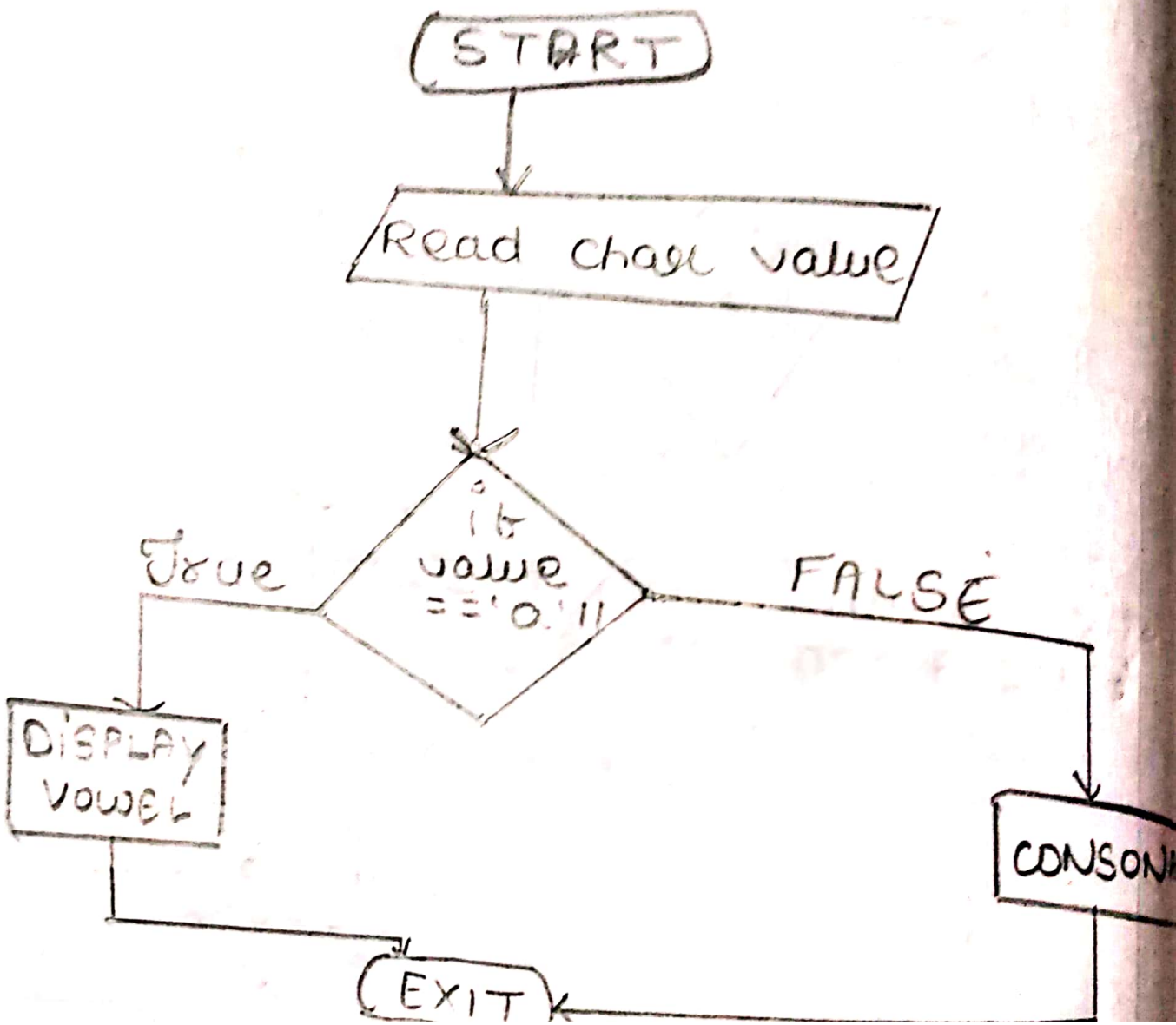
OUTPUT: Enter a alphabet: o
vowel

SE. Enter a alphabet: v
consonant

Flow chart



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)AP a program to find whether the characters is vowel or consonant

Algorithm:
Step1: Start
2: Read characters value from user.
3: if value=='a' || value=='e' || value=='i' ||
value=='o' || value=="u" || value=='A' ||
value=='E' || value=='O' || value=='I' ||
value=='U'
4: EXIT

SOURCE CODE:

```
#include<stdio.h>
#include<conio.h>
  void main()
  {
   Char a;
   clrscr();
   printf("Enter the Alphabet:");
   Scanf("%c",&a);
if(a=='a'||a=='e'||a=='i'||a=='o'||a=='u'
  ||a=='A'||a=='E'||a=='I'||a=='O'||a=='U')
  {
  printf("Vowel");
  }
  else
  {
   printf("consonant");
   }getch();}
```

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PRACTICAL -4

Aim: Write a program to print numbers between 1-50 using while loop.

SOURCE Code

```
#include <stdio.h>
#include <conio.h>
void main()
{
  int i, n = 50;
  clrscr();
  printf("All even numbers from 1 to 50 are:\n");
  i=2;
  while(i<=n)
  {
  printf("%d\n", i);
  i=i+2;
  }
  getch();
}
```

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OUTPUT :-

All even no. from 1 to 50 are

2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40
42
44
46
48
50

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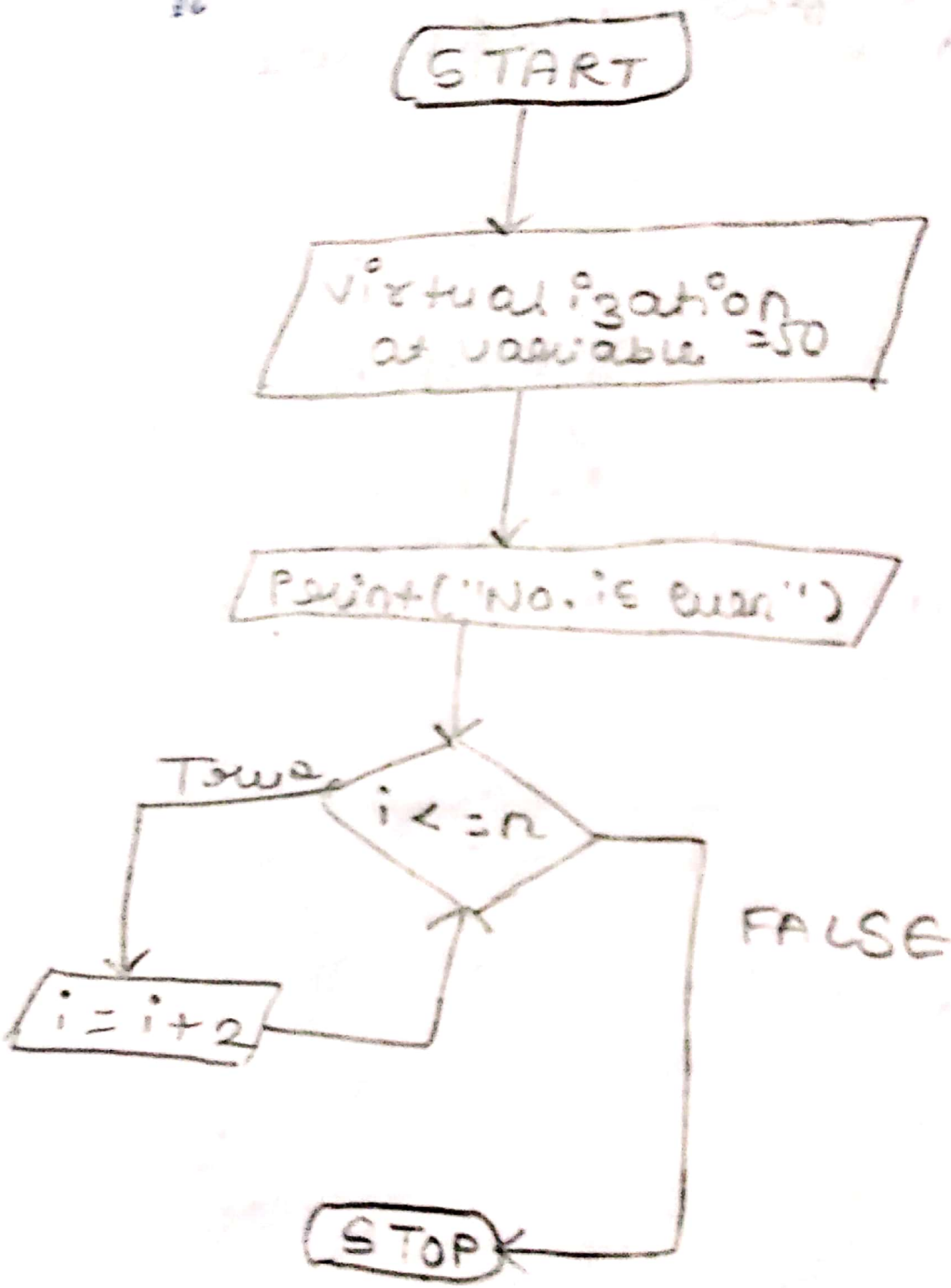

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Algorithm

S1: Start
S2: Initialize two variable with static variable where n = 50.
S3: Use while loop for picking the even numbers upto the range 50
S4: Adding 2 to correct even number will give next even number.
S5: Display appropriate output
S6: STOP

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6) Write a program to print odd numbers

```
code
#include <stdio.h>
#include<conio.h>
Void main()
{
int i, n = 50;
clrscr();
printf("Odd no. from 1 to 50
                are:\n", n)
i=1;
{
if(i%2==1)
  {
    printf("%d\n", i);
  }
  i++;
}
while(i<=n)
getch();
```

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output

odd no. from 1 to 90 are 36

1
3
5
7
9
11
13
15
17
19
21
23
25
27
29
31
33
35
37
39
41
43
45
47
1

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Algorithm

1) START
2) Initialize two static variable n=50, i=1,
3) Use do while loop for 5 iterate from 1 to 50
4) Use if condition statement to check whether given number is even or odd
5) Increment the value of i & 1
6) Display the appropriate output.
7) Stop

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c) code

```
#include <stdio.h>
#include <conio.h>
  void main()
  {
    int i, n, sum=0;
    clrscr();
    printf("Enter the range:");
    scanf("%d",&n);
    for(i=2;i<=n;i=i+2)
    {
      sum=sum+i;
    }
    printf("Sum of all even
            upto the range one
            ,sum);
}  getch();
```

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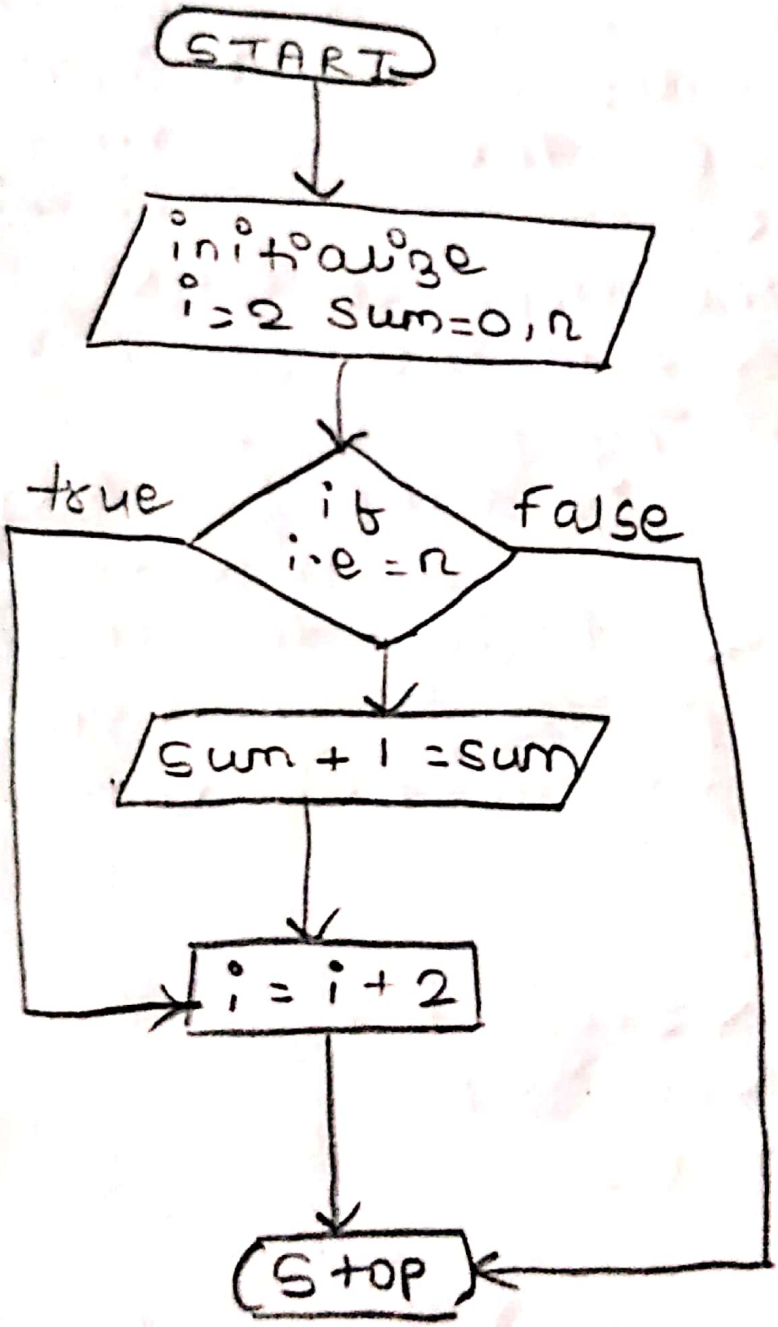
Output

Enter the range 10
Sum of all even numbers upto range are 30



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output

88 Enter the no. of term

0
1
1
2
3
5
8

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PRACTICAL - 5

* Programe : Find ~~no.~~ of ~~even~~ fibonacci series using array.

Algorithm :-

S1: Declare a array of anysize.
S2: Accept a value from user till you want to display the fibonacci series. Start from 0 & 1
S3: User for loop to develop fibonacci series.
S4: Use for loop to
S5: display the series using printf()
S6 - display series using printf() function.

* To represent multidimensional array in matrix format.

Algorithm

S1: Start
S2: accept 4 variable i, j, row, col
S3: declare the array of a size.
S4: Ask the user to enter the no of row they want.
S5: By using for loop and the nested for loop for represe of data user will enter.
S6: By using Print the inputed data by print statement inc for intendation between the

Code:

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int i, j, row, col, a[50];
    clrscr();
    printf("Enter the no. of row");
    scanf("%d", &row);
    printf("Enter the no. of col
```

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output

Enter the no of row 3
Enter the no of col 3
The display Matrix

3 2 1
4 3 0
5 3 6

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```
scanf("%d", &col);
printf("\n The display matrix");
for(i=0; i<row; i++)
{
    for(j=0; j<col; j++)
    {
        printf("\t%d", a[i][j]);
    }
    printf("\n");
}
getch();
}
```

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