

PRACTICAL NO. 1.

(A) Aim :- Write a programs to understand basic datatypes .

Source Code :-

```
# include <stdio.h>
# include <Conio.h>
void main()
{
    int rollno;
    char name[50];
    long int mobno;
    float per;
    char grade;
    clrscr();
    printf("***** Demonstration of Datatype *****\n");
    printf("Enter roll number: \n");
    scanf("%d", &rollno);
    printf("Enter your name: \n");
    scanf("%s", &name);
    printf("Enter your mobile number: \n");
    scanf("%ld", &mobno);
    printf("Enter your percentage: \n");
    scanf("%f", &per);
    printf("Enter your grade: \n");
    scanf("%c", &grade);
    printf("Your roll number is: %d \n", rollno);
```

```
print f ("your name is : %s \n", name);  
print f ("your mobile is : %.f \n", per );  
print f ("your grade is : %.c \n", grade );  
getch();
```

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Output :

* * * * * Demonstration of Datatype is * * * *

Enter your roll number :

1747

Enter your name :

Chandresh

Enter your mobile number :

8928816800

Enter your percentage

85

Enter your grade

A

B) Aim :- Area of triangle

include < stdio.h >

include < conio.h >

{ void main ()

float len , bred , area ;

clrscr () ;

print f (" Enter the length : \n ") ;

scanf ("% .f " , & len) ;

print f (" Enter the breadth : \n ") ;

scanf ("% .f " , & bred) ;

area = len * bred ;

print f (" Area of rectangle is : % .f \ n " , area) ;

getch () ;

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15/01/2020

Output :

Enter the length :

12

Enter the breadth :

5

Area of rectangle is :

60.00000

PRACTICAL - 2

a. AIM :- Write a c program which will show the use of various different types of operators.

Source Code :- # Arithmetic operators

```
# 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 numbers : %d\n" , add);
    Sub = num1 - num2;
    printf ("Subtraction of 2 numbers : %d\n" , Sub);
    mul = num1 * num2;
    printf ("Enter multiplication of 2 numbers : %d\n" , mul);
    div = num1 / num2;
    printf ("Division of 2 numbers : %d" , div);
    getch();
}
```

Output :-

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Enter 1st number :- 4

Enter 2nd number : 10

Addition of 2 numbers : 14

~~Subtraction of 2 numbers : 6~~

~~Multiplication of 2 numbers : 40~~

~~Division of 2 numbers : 0.4~~

Logical Operators

```

#include <stdio.h>
#include <Conio.h>
void main()
{
    int x, y, z, value1, value2, value3, value4,
        values;
    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("value 1 is : %d \n", value1);
    value2 = (x = y) && (z < y);
    printf("value 2 is : %d \n", value2);
    value3 = (x < y) && (z = y);
    printf("value 3 is : %d \n", value3);
    value4 = !(x == y);
    printf("value 4 is : %d \n", value4);
    values = (x == y);
    printf("values is : %d \n", values);
    getch();
}

```

Output :-

Enter 1st value : 9

Enter 2nd value : 8

Enter 3rd value : 2
value 1 is : 0

value 2 is : 1

value 3 is : 1

value 4 is : 0

value 5 is : 1

Temporary 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 : b>c ? b:c;
    printf("The biggest number is: %.d", big);
    getch();
}
```

Output :- The biggest number is 100 30

100 99 98 97 96

95 94 93 92

91 90 89 88

87 86 85 84

83 82 81 80

79 78 77 76

73 72 71 70

69 68 67 66

63 62 61 60

59 58 57 56

53 52 51 50

49 48 47 46

43 42 41 40

39 38 37 36

35 34 33 32

29 28 27 26

23 22 21 20

19 18 17 16

13 12 11 10

9 8 7 6

5 4 3 2

1 0

PRACTICAL - 3

Aim :- Decision Statements

- a) Write a c program to find out odd & even numbers

ALGORITHM :-

~~Step 1 :- Start~~

~~Step 2 :- [Take Input] Read year from the user~~

~~Step 3 : Check if number % 2 == 0 then
print even Number~~

~~Step 4 : Exit~~

SOURCE 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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}

else
{

} printf (" Odd Number ");

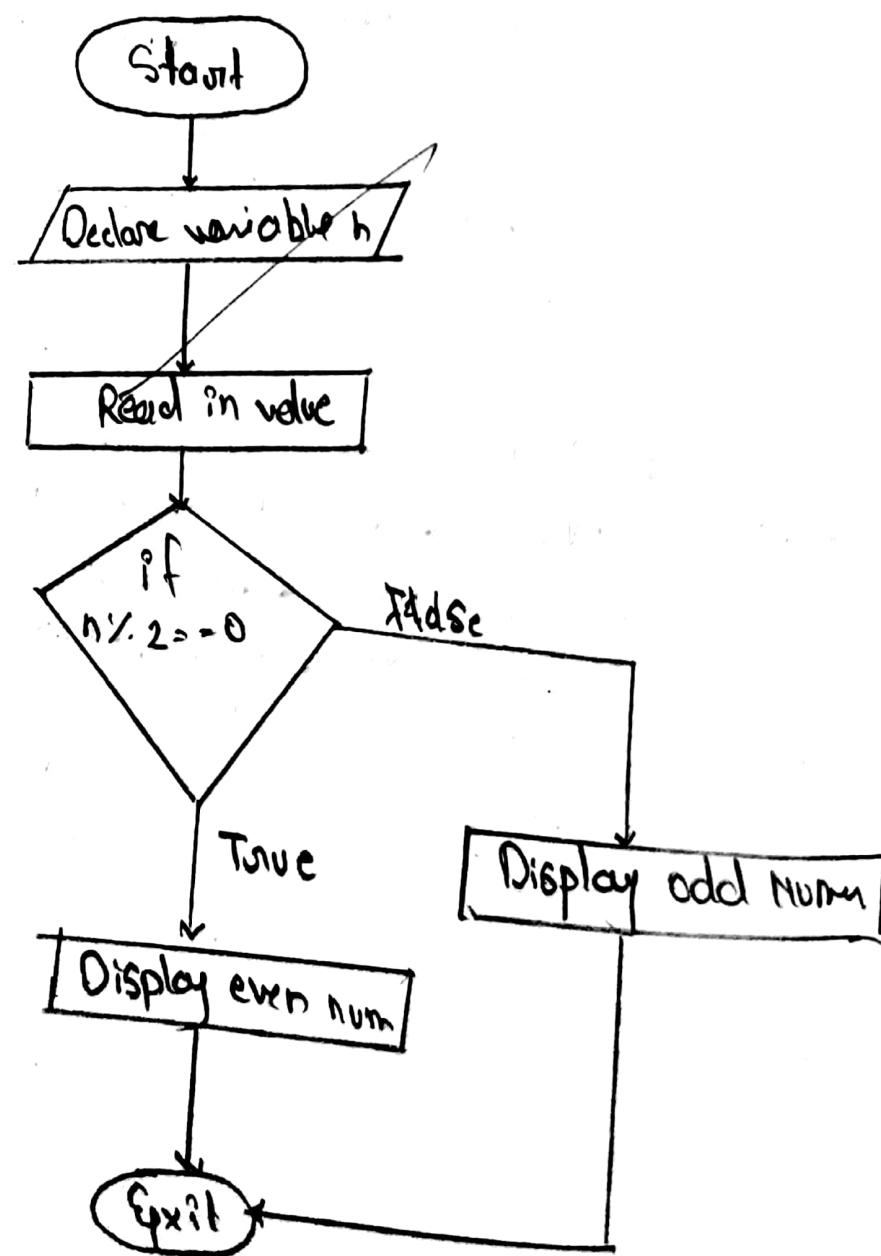
} getch ();

Output :-

Enter a number : 26
Even number.

Enter a number : 53
Odd number.

FLOWCHART :-



b) Write a program to find the method year is a leap or not!

ALGORITHM :-

Step 1 = Start

Step 2 : [Take Input] Read year from the user

Step 3 : if $\text{year} \% 4 == 0$ and $\text{year} \% 400 == 0$ or
 $\text{year} \% 4 == 0$ and $\text{year} \% 100 != 0$
print NOT A LEAP YEAR

Step 4 : Exit

Source Code :-

```
# include <stdio.h>
```

```
# include <Conio.h>
```

```
void main()
```

```
{
```

```
int year;
```

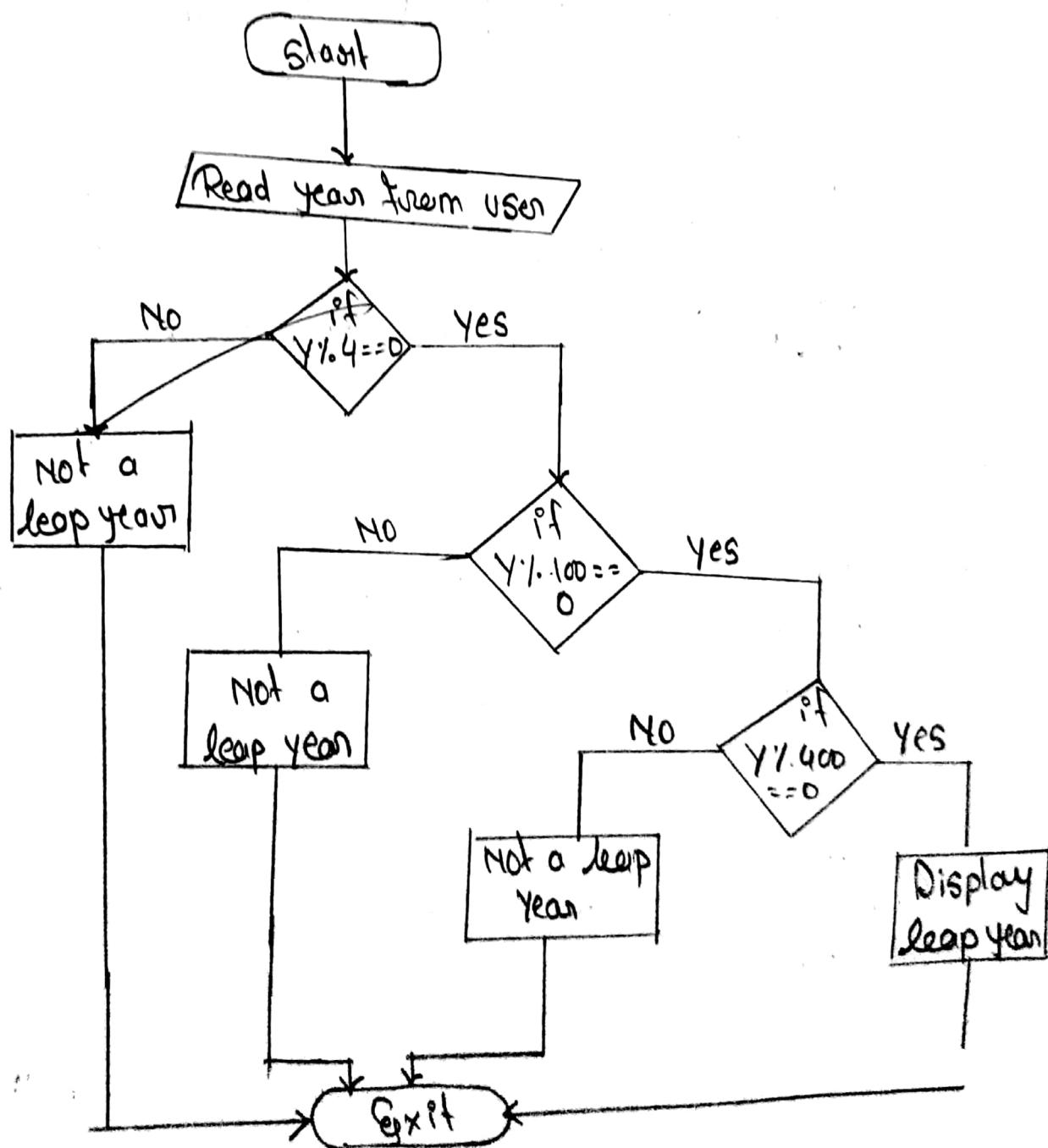
```
clrscr();
```

```
Pointf ("Enter a year: ");
Scanf ("%d", &year);
if (year % 4 == 0)
{
    if (year % 100 == 0)
        if (year % 400 == 0)
            pointf ("Leap year!");
        else
            pointf ("NOT a leap year");
    else
        pointf ("NOT a leap year");
}
else
    pointf ("NOT a leap year");
getch();
```

output :

- Enter a year : 2017
Not a leap year
- Enter a year : 2020
leap year

FLOWCHART :



Write a program to find whether the character is vowel or consonant.

ALGORITHM :-

Step 1 : Start

Step 2 : [Take input] Read character value from user

Step 3 : [Check] if value == 'a' || value == 'e' ||
value == 'i' || value == 'o' || value == 'u' ||
value == 'A' || value == 'E' || value == 'I' ||
value == 'O' || value == 'U'

Step 4 : Output

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");
    }
}
```

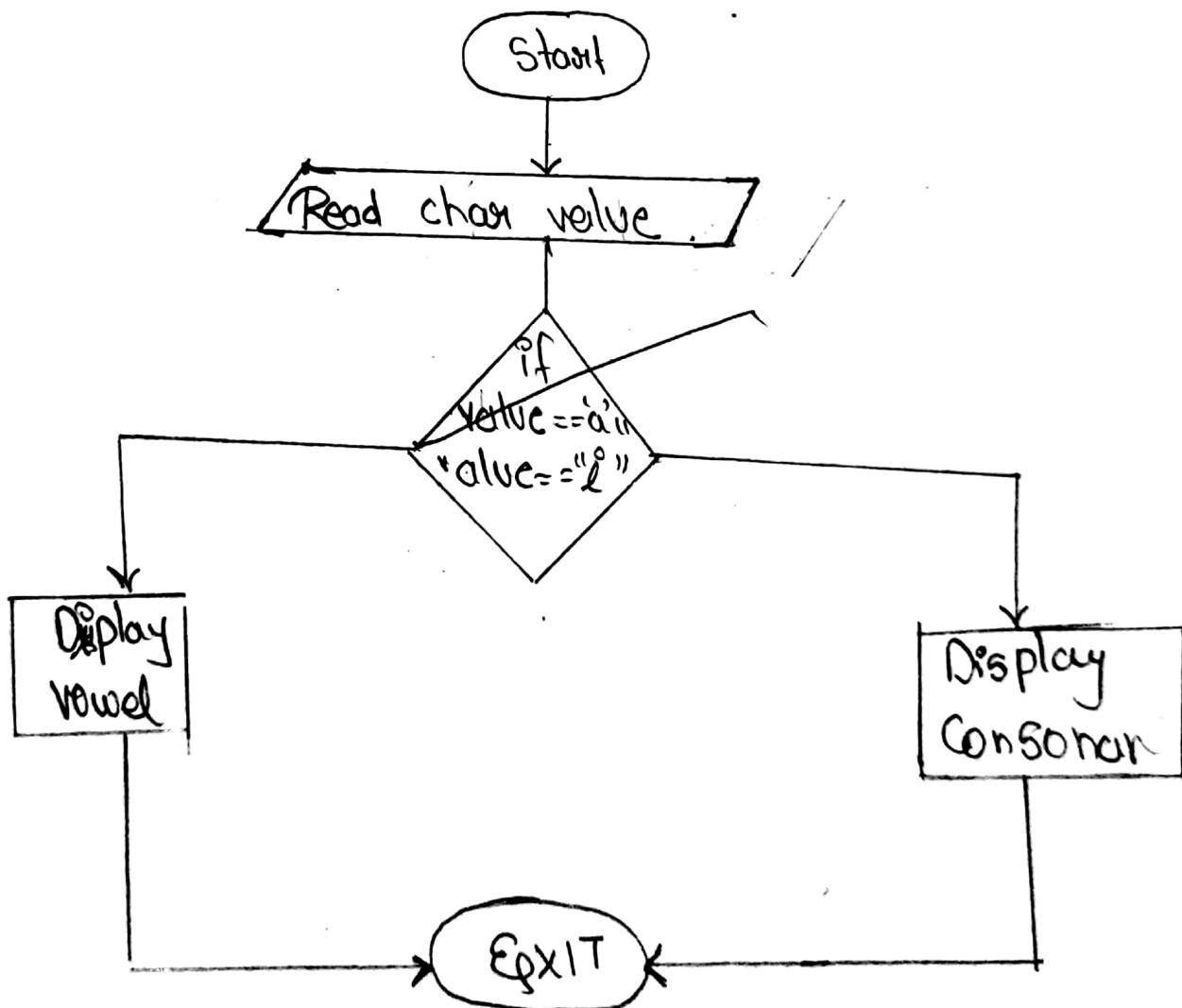
```
3 else
4 { printf( "Consonant" );
5 }
6 getch();
```

output :-

Enter a alphabet : o
vowel

Enter a alphabet : x
Consonant

Flowchart :-



PRACTICAL - 4

- Aim : Loops statements
Q) Write a program to print even number
return 1 to 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();
}
```

~~All even numbers from 1 to 50 are : 1~~

ALGORITHM :

Step 1 : Start

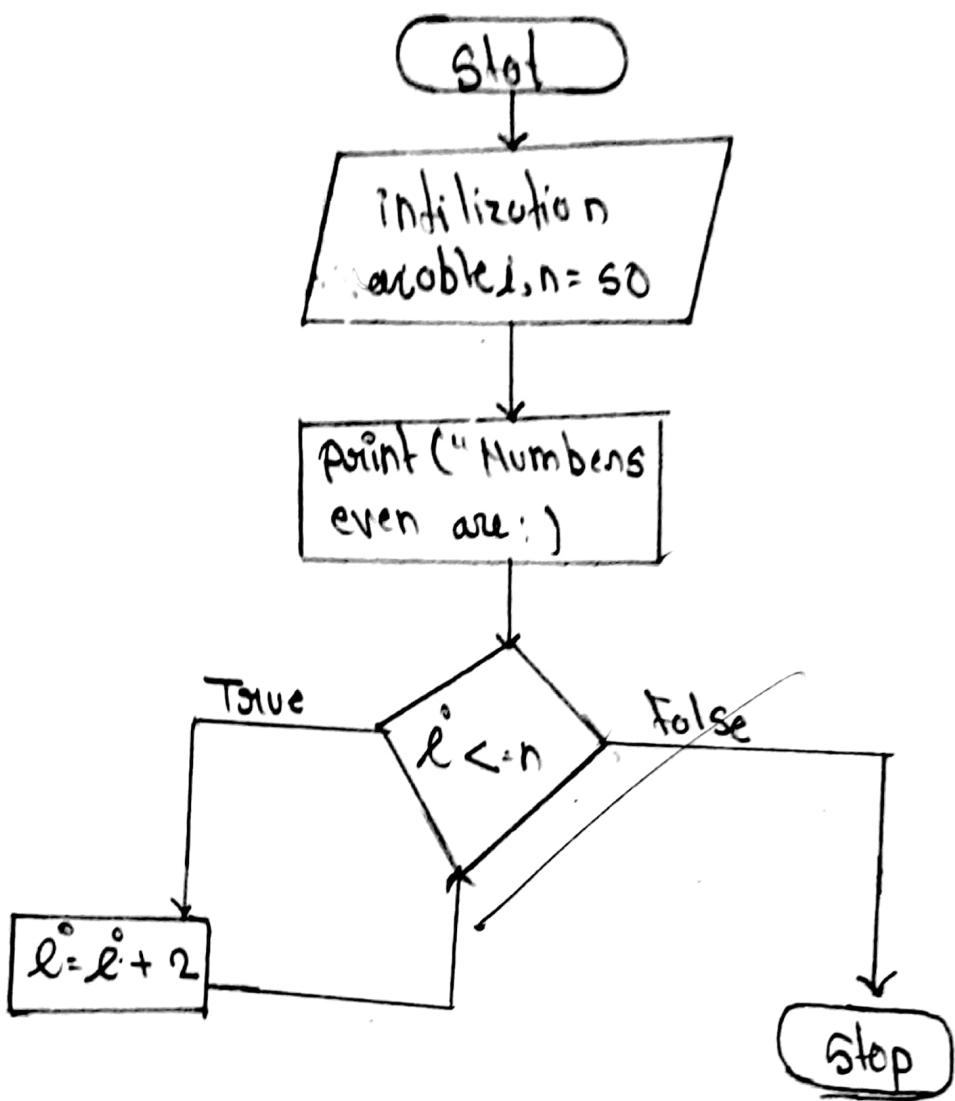
Step 2 : Initialize two variable with static variable
where $n=50$ & $i=2$

Step 3 : Use while loop for printing the even number
upto the range 50

Step 4 : Adding 2 to Current even number will give
next even number

Step 5 : Display the appropriate output

Step 6 : exit

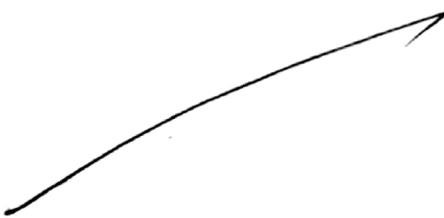


Output :

36

All even numbers 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



b) Write a C program to print odd numbers from 1 to 50 using do while loop.

Source Code :-

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

ALGORITHM :-

Step 1 : Start

Step 2 : Initialize two variable $n=50$ $i=1$,
and take

Step 3 : use do while loop for ~~iterate~~ from 1 to 50

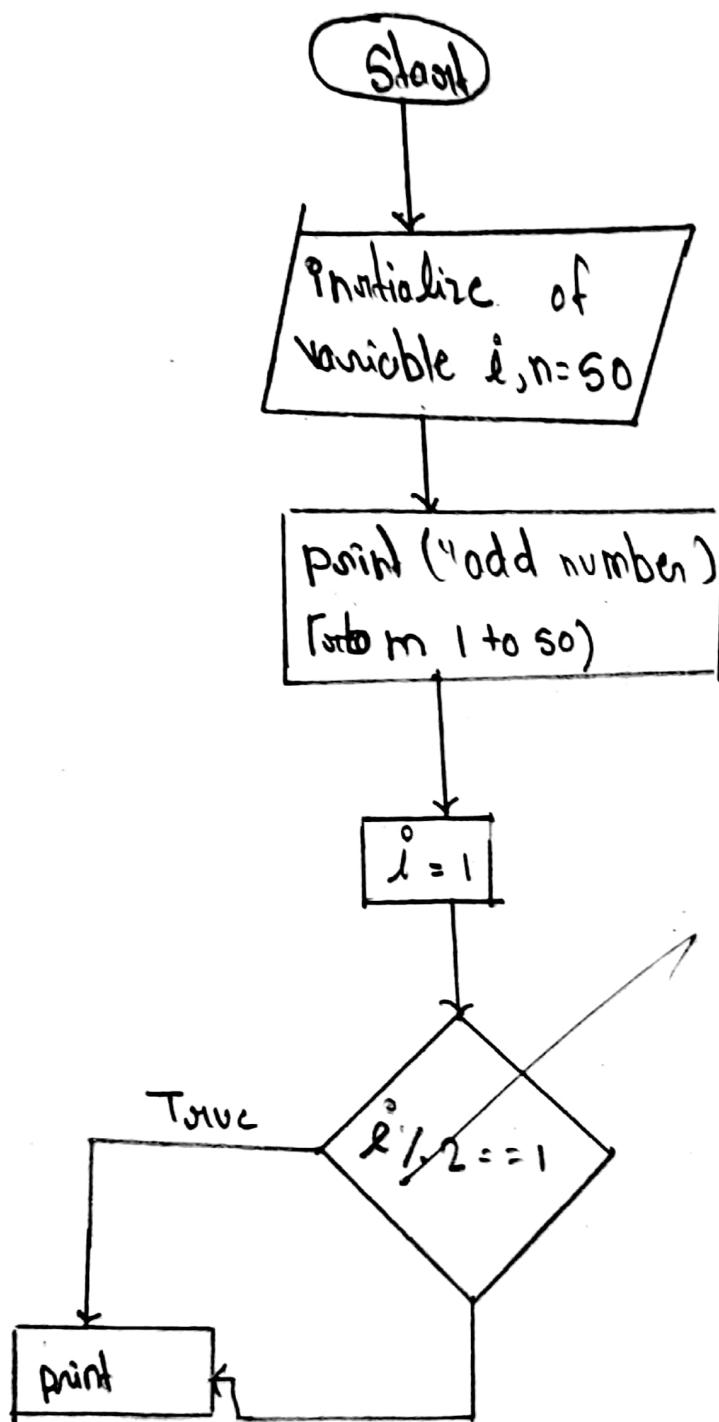
Step 4 : use if Condition Statement to check whether
given number is even or odd.

Step 5 : Increment the value of i .

Step 6 : Display the appropriate output

Step 7 : Stop

:-8



output %:

1
3
5
7
9
11
13
15
17
19
21
23
25
27
29
31
33
35
37
39
41
43
45
47
49

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Q) Write a C program to print sum of all even numbers between 1 to n using for loop.

Source 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+=2)
    {
        sum = sum + i;
    }
    printf("Sum of all even numbers upto the
range are: ", sum);
}
```

ALGORITHM:-

Step 1 : Start

Step 2 : Initialize the variable of
and one is dynamic
 $i=2$, $Sum=0$; n ;

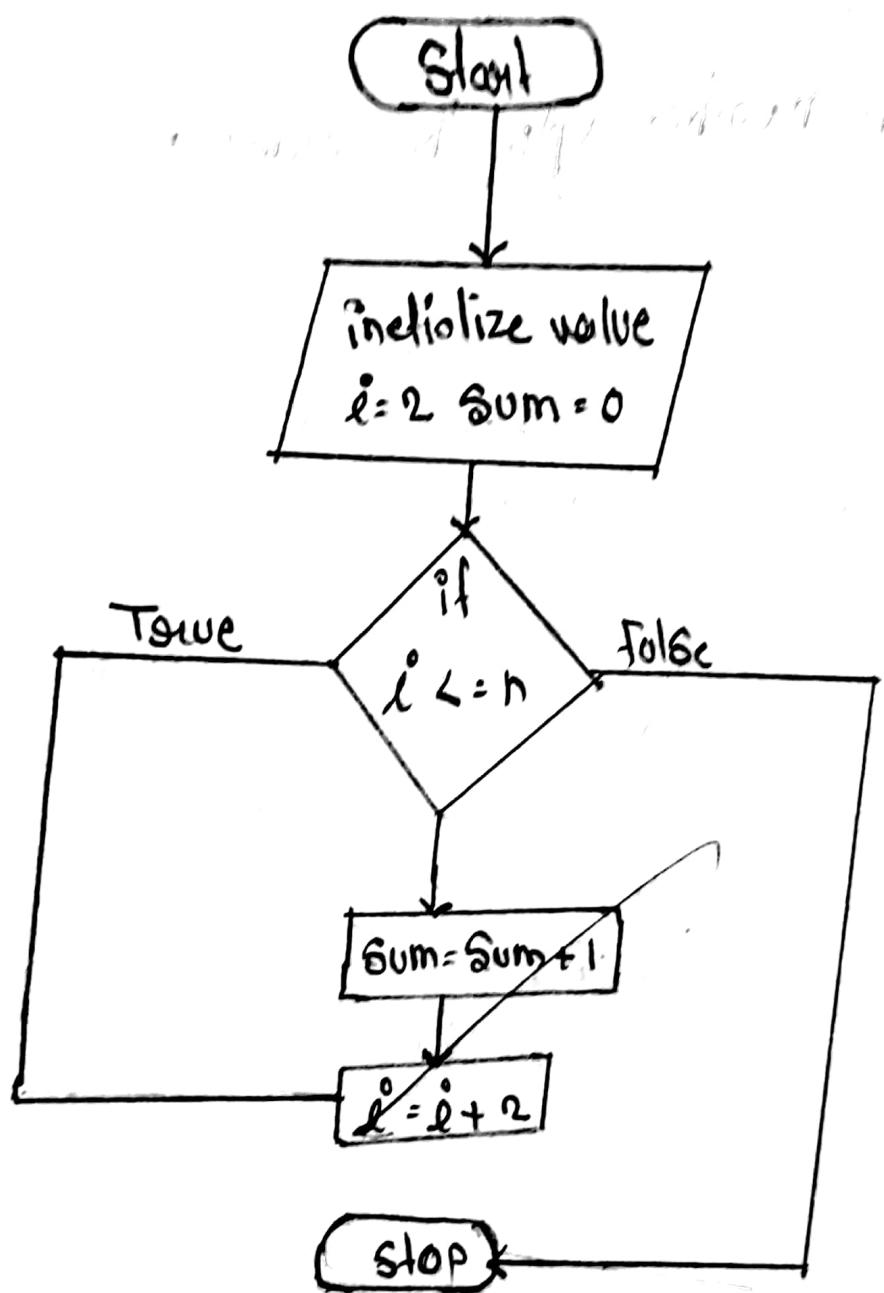
Step 3 : Use for loop for check the condition
Satisfy the given range

Step 4 :- Add Current even number

Step 5 : Display the appropriate

Step 6 : Stop.

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Output :

Enter the range 10.

~~Sum of all even number upto the range are 30~~