Armstrong & numbers.

write a C Program to Check given 3 digit & number is amstrong & not.

Amstrong number is a number, that is equal to the sum of the cubes of individual digits

Ex:- 0, 1, 153

Input :- It requires one input

Output :- It requires one output

Step 1 :- Start

Step 2 :- Declare variable n, sum, temp, rem.

Step 3 :- Read n

Step 4 :- Initialize temp with n
(:. temp = n)

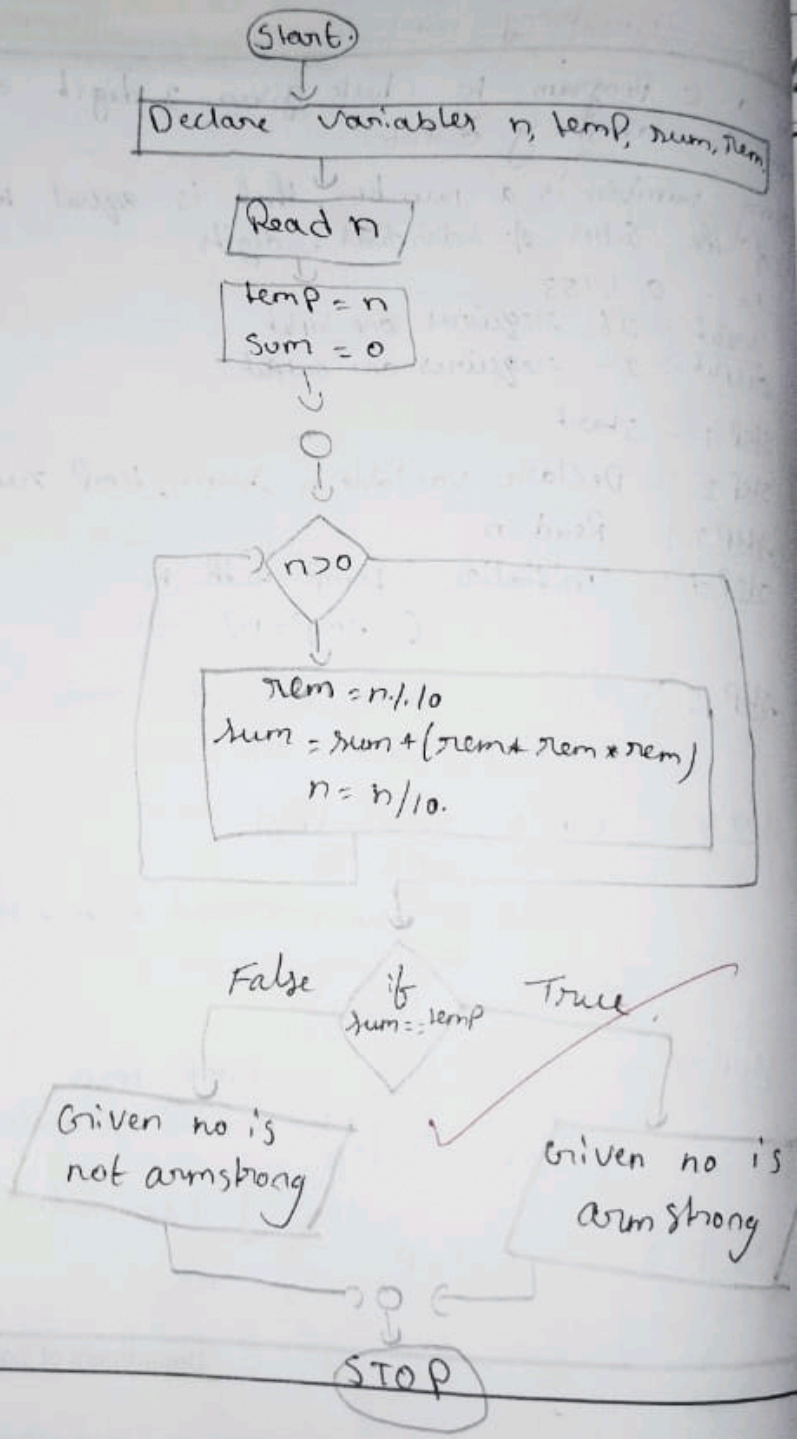
Step 5 :- Sum is initialize with zero
(:. Sum = 0)

Step 6 :- while n!=0 then
rem = n%10
sum = sum + (rem * rem * rem)
n = n/10
end while

Step 7 :- if sum == temp then
display no the armstrong
else
display not armstrong.

Step 8 :- STOP

Flow Chart


Start
Declare variables n, temp, sum, rem.
Read n
temp = n
sum = 0
n>0
rem = n%10
sum = sum + (rem * rem * rem)
n = n/10.
if sum == temp
False
True
Given no is not armstrong
Given no is armstrong
STOP

Sum of individual number

Write 'c' Program to find sum of individual digits of positive number

Input :- It requires one input

Output :- It requires one Out Put

Step 1 :- Start

Step 2 :- Declare Variables, n, sum, rem

Step 3 :- Read n

Step 4 :- sum is initialized with zero (∵ sum = 0)

Step 5 :- while n > 0 then
rem = n % 10
sum = sum + rem
n = n/10
end while

Step 6 :- Display sum

Step 7 :- Stop

Program :-

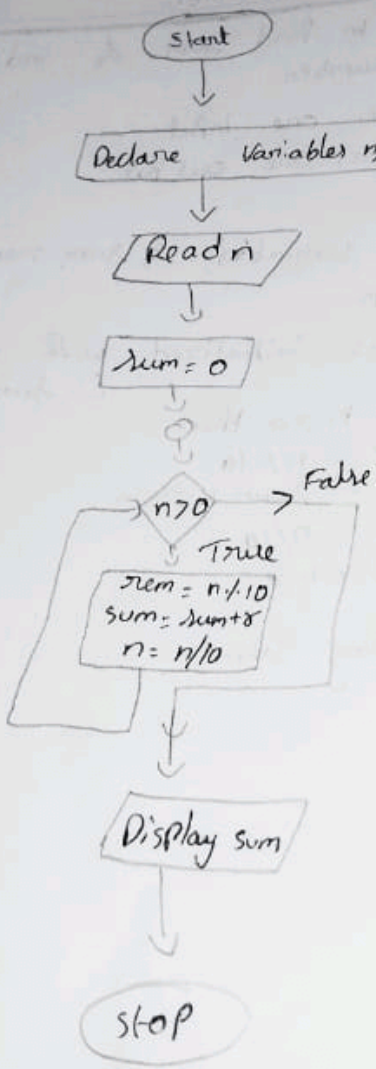
```
# include < stdio.h>
int main ()
{
int n, temp, rem, sum =0;
Printf ("entre n value");
Scanf ("%d", &n);
    temp = n;
while (n>0)
{
rem = n % 10
sum = sum( rem * rem * rem);
      n= n/10;
    }
    if (sum == temp)
Printf ("given is armstrong");
else
Printf ("given is not armstrong");
    return 0;
}
```

Output

entre n value 343
given is not armstrong
enter n value 153
given is armstrong

Ramya 8/3/24

Flow Chart


Start
Declare variables n, sum, rem
Read n
sum = 0
n>0
False
True
rem = n%10
sum = sum+r
n = n/10
Display sum
Stop

Sum of individual number

Program

```
#include <stdio.h>
int main()
{
int n, sum = 0, rem;
Printf ("enter a value");
scanf ("%d", &n);
while (n>0)
{
rem = n%10
sum = sum + rem
n = n/10
}
Printf ("sum of individual digit %
d", sum);
return 0;
}
```

Output

```
enter a value 234
sum of individual digit.
enter a value 123
sum of individual digi
```

fibanacci sequence

write a c Program to generate fibanocci sequence.

* fibanoci sequence is the seque where the next term sum of Previous two terms
* the first two number of fibanocci sequence 0 & 1

input :- It requires one input

output :- It has more than one output depending upon the input limit

step 1 :- Start

step 2 :- Declare variables, a, b, c, i, n.

step 3 :- Read n.

step 4 :- Initialise the variables.

a = 0, b = 1

step 5 :- for (i = 1; i <= n; i++)

step 6 :- Display the value of a.

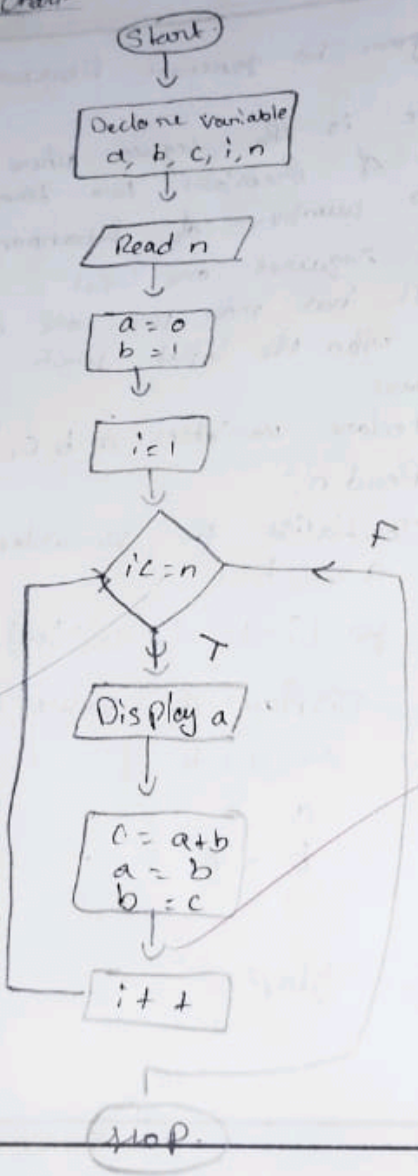
step 7 :- c = a + b

a = b

b = c

step 8 :- Stop.

Flow Chart


Start
Declare variable
a, b, c, i, n
Read n
a = 0
b = 1
i = 1
i<=n
F
T
Display a
c = a+b
a = b
b = c
i + +
Stop

Program

```
# include <stdio.h>
int main()
{
int a=0, b=1, c, i, n;
Printf ("enter a value");
Scanf ("%d", &n);
for (i=1; i<=n; i++)
{
Printf ("%d\n", a);
c = a+b;
a = b;
b = c;
}
return 0;
```

Output

enter a value 3:
0
1
1

11/3/24

Palindrome & not

Le a c Program to check the given number is lindrome & not

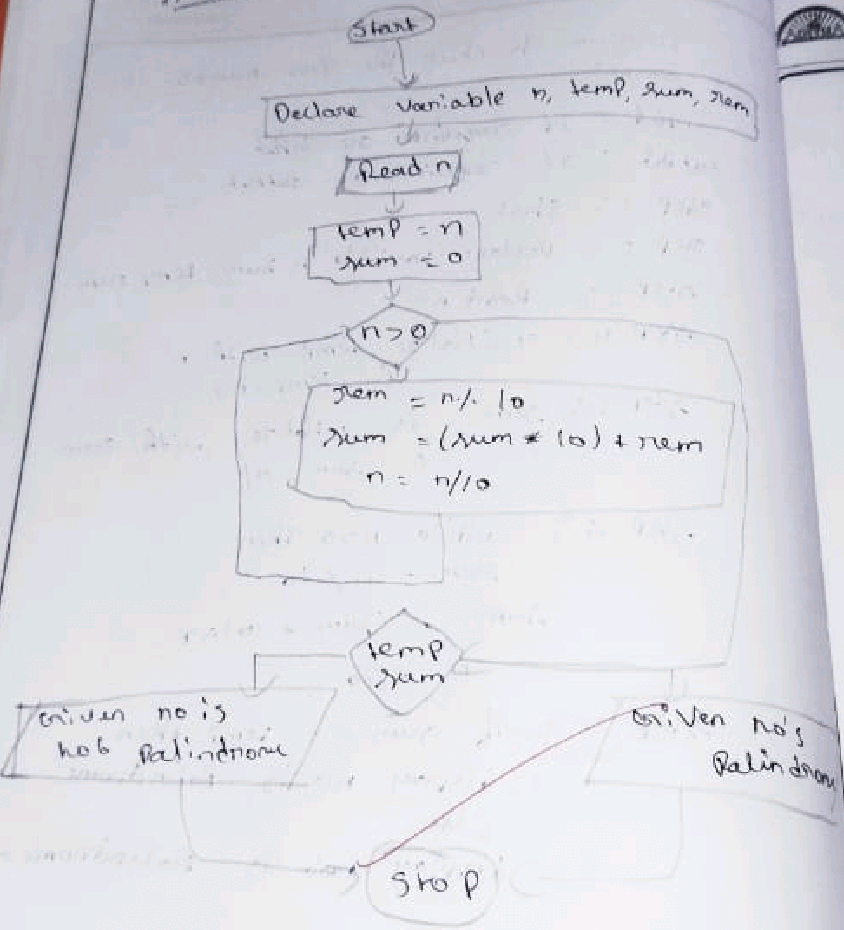
InPut :- It requires one inPut
OutPut :- It requires one outPut
Step 1 :- Start
Step 2 :- Declare variable n, sum, temp, rem
Step 3 :- Read n
Step 4 :- Initialize temp with n
(:. temp = n)
Step 5 :- sum is initialize with zero
(:. sum = 0)

Step 6 :- while n > 0 then
rem = n % 10
sum = = (sum * 10) + r
n = n/10

Step 7 :- if sum = = temp then
display no is Palindrome
else
display not is Palindrome

Step 8 :- STOP

Flow Chart



Program

Convert into hours to seconds

Write a 'c' Program to Convert into hours to seconds

Algorithm.

Input :- It requires one input

Output :- It requires one output

Step 1 :- Start

Step 2 :- Declare variable hours, seconds.

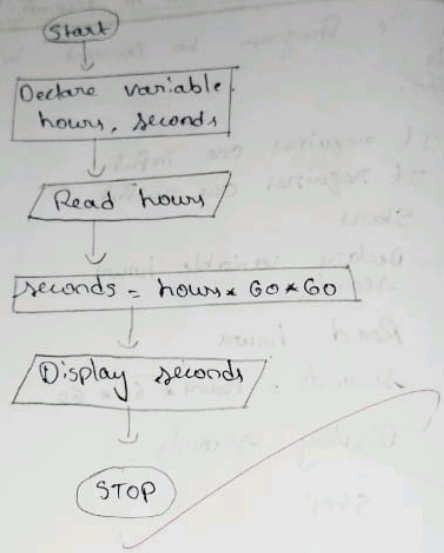
Step 3 :- Read hours

Step 4 :- seconds = hours * 60 * 60

Step 5 :- Display seconds.

Step 6 :- Stop.

Flow Chart


Start
Declare variable hours, seconds
Read hours
seconds = hours * 60 * 60
Display seconds
STOP

Prime number or not

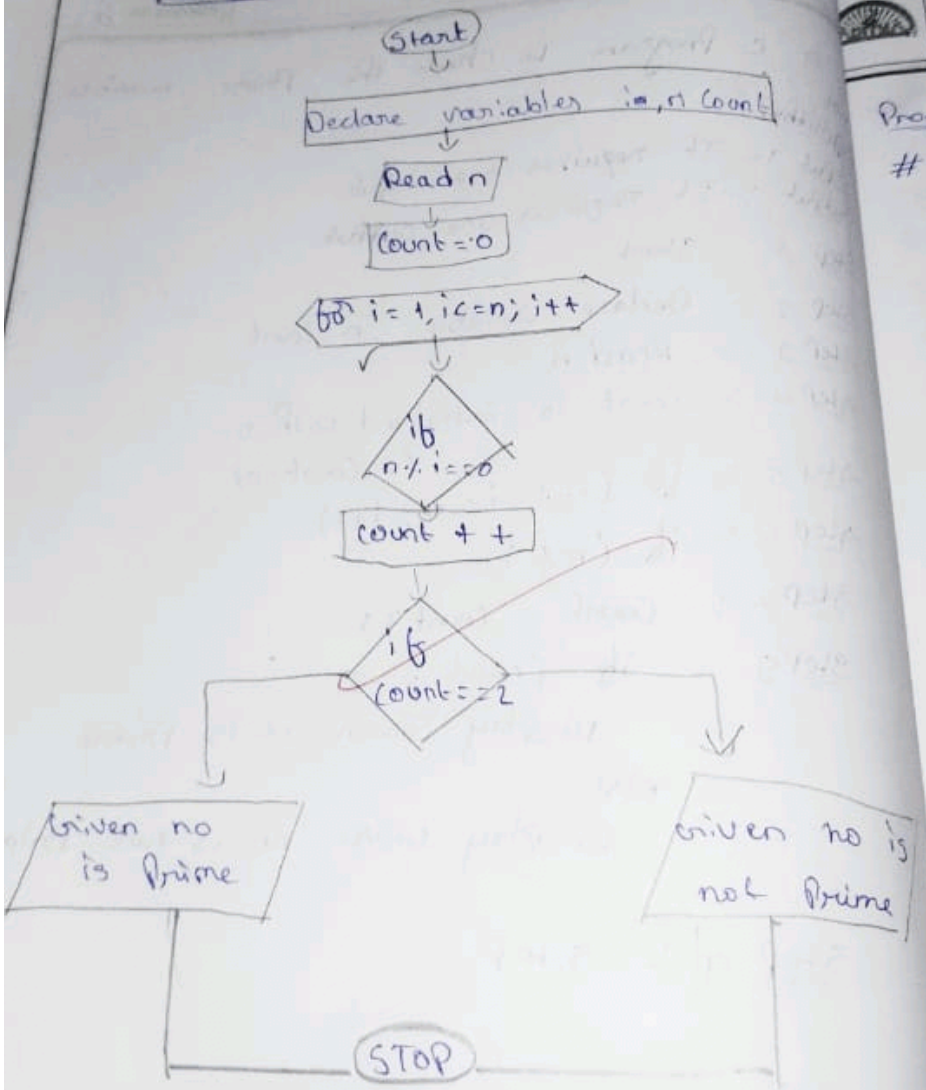
Write A C Program to check the Prime number or not.

Algorithm

Input :- It requires one input.
Output :- It requires one output
Step 1 :- Start
Step 2 :- Declare variable i, n, count
Step 3 :- Read n
Step 4 :- Count is initialized with 0 (∵ count = 0)
Step 5 :- for (i=1; i<=n; i++)
Step 6 :- if (n % i == 0)
Step 7 :- Count = count + 1
Step 8 :- if (count == 2)
Display Given no is Prime
else
Display Given no is not Prim

Step 9 :- Stop

Flow Chart



Program

```
# in cl
int n
{
int
```

ADITYA DEGREE COLLEGE

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Practical No. 7

Calculate expression ((a*b)/c)+(a+b-c)

Write a c Program to calculate expression ((a*b)/c)+(a+b-c)

Input :- It requiries three input

output :- It requires the one output

Step 1 :- Start

Step 2 :- Declare variable a, b, c, result

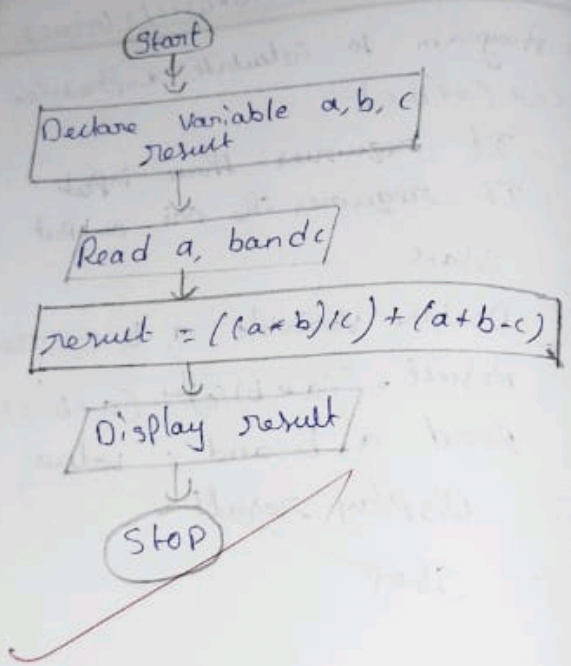
Step 3 :- Result = ((a * b)/c) + (a+b-c)

Step 4 :- Read a, b and c values.

Step 5 :- Display result

Step 6 :- Stop

Flow Chart


Start
Declare variable a, b, c result
Read a, b and c
result = ((a*b)/c) + (a+b-c)
Display result
STOP

Calculate $(a+b+c)^3$

write a c Program to calculate $(a+b+c)^3$.

Input :- requries three inputs

Output :- It requries one output

Step 1 : Start

Step 2 :- Declare variable a, b, c, result

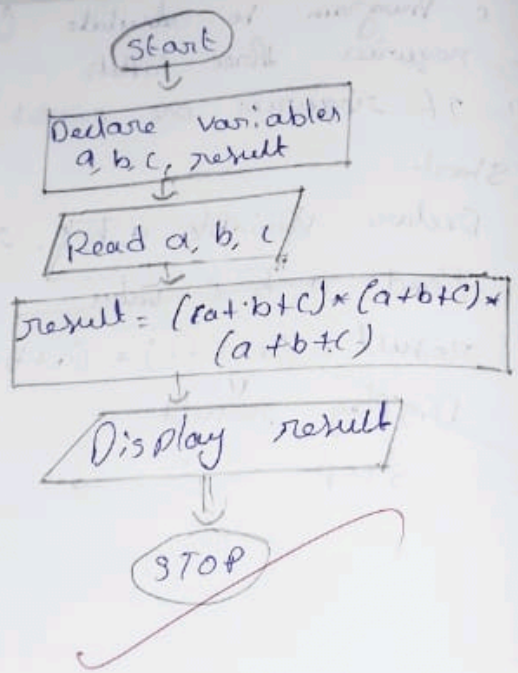
Step 3 :- Read a, b, c, value

Step 4 :- result = (a+b+c) * (a+b+c) * (a+b+c

Step 5 :- Display result

Step 6 :- STOP

Flow Chart


Start
Declare variables a, b, c, result
Read a, b, c
result = (a+b+c) * (a+b+c) * (a+b+c)
Display result
STOP

Program

```
#include <stdio.h>
int main()
{
float a, b, c, result;
Printf ("enter 3 values:");
scanf ("%f %f %f", &a, &b, &c);
result = (a+b+c) * (a+b+c) * (a+b+c)
Printf ("%2f") result);
return 0;
}
```

Out Put

Enter 3 values: 234.
729.00

22/6/24

ADITYA DEGREE COLLEGE

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Date: 2/4/24
Practical No. 9

Prime number up to Range

Algorithm

write a c Program to Generate all the Prime number between 1 and n, where end is value supply by user

Step 1 :- Start

Step 2 :- Declare variables i, j, n, count

Step 3 :- Read n value

Step 4 :- count is initialised with zero (:' count=0)

Step 5 :- for i=1; i<=n; i++

Step 6 :- for j=1; j<=i; j++

Step 7 :- if i % j == 0 then

Step 8 :- count is incremented by 1 (:' count++)

Step 9 :- if count == 2

Step 10 :- display i value

Step 11 :- stop

Program

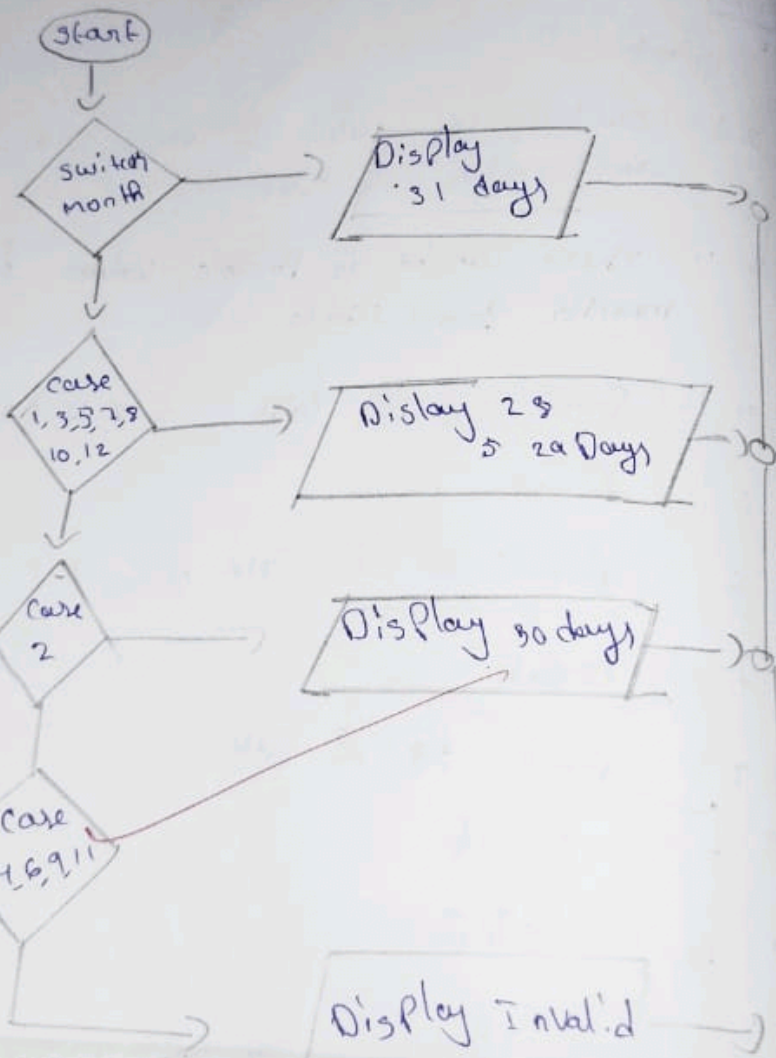
```
# include < stdio.h>
int main ()
{
  int i, j, n, count;
  Printf ("enter n value");
  scanf ("%d", &n);
  for (i = 1; i <= n; i++)
  {
    count = 0;
    for (j = 1; j <= i; j++)
    {
      if (i % j == 0)
        count ++;
    }
    if (count == 2)
    {
      Printf ("%d \n", i);
    }
  }
  return 0
}
```

Output

enter n, value 5
2
3
5

22/6/24

Flow chart


start
switch month
Display 31 days
case 1,3,5,7,8 10,12
Display 28 or 29 Days
case 2
Display 30 days
case 4,6,9,11
Display Invalid

```
break;
Case 2:
Printf("28 o 29 days");
return 0;
}
}
```

O/P
enter month
30 day.

22/6/24

Triangle form

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* write a c program to Print number in a triangle form

Algorithm

Step 1 :- Start

Step 2 :- Declare variable i,j,n;

Step 3 :- Read n

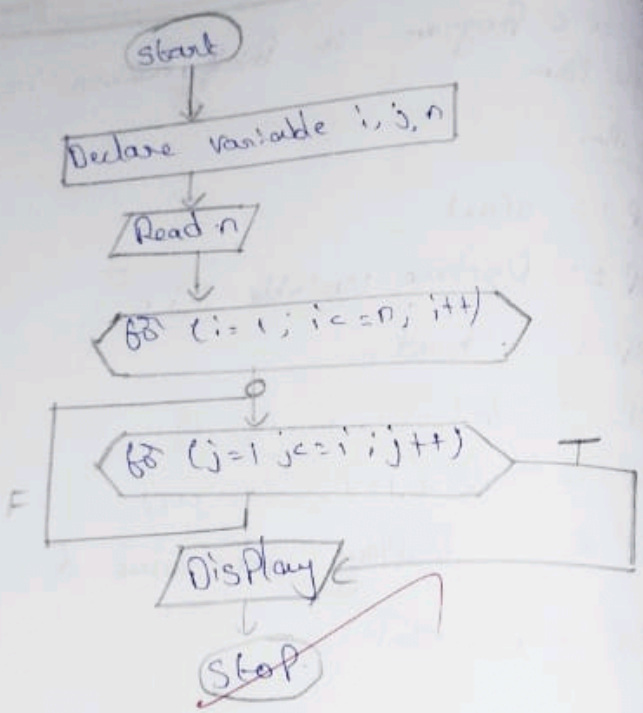
Step 4 :- for(i=1; i<=n; i++)

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

Step 6 :- Display the value of j

Step 7 :- Stop.

Flow chart


Start
Declare variable i, j, n
Read n
for (i=1; i<=n; i++)
for (j=1 j<=i ; j++)
T
F
Display
Stop

ADITYA DEGREE COLLEGE

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Practical No. 12

Addition of two matrix

* write a c Program for addition of two matrix

Algorithm

Step 1:- Start

Step 2:- Declare variables a[10][10] b[10][10], r, c, i, j, sum[10][10]

Step 3:- Read row size (r) & Column size(c)

Step 4:- for i=0, i<r inc by 1 then
for j=0; j<c inc by 1
read matrix a[i][j]

Step 5:- for i=0 i<r inc by 1 then
for j=0 j<c inc by 1
read matrix b[i][j]

Step 6:- for i=0 j<r inc by 1 then
for j=0 j<c inc by 1
sum[i][j]=a[i][j]+b[i][j]

Step 7:- for i=0; i<r inc by 1 then
for j=0 j<c inc by 1

Step 8:- Stop

```
#include <stdio.h>
int main()
{ int i, j, n;
Printf("Enter n");
scanf("%d", &n);
for (i=1; i<=n; i++)
{
  for (j=1; j<=i; j++)
    {
      Printf("%d", j);
    }
    Printf("\n");

}
Return 0;

}
```

O/P

Enter n 4

1
1 2
1 2 3
1 1 3 4.

Kavya 22/6/24

```
# include <stdio.h>
int main()
{
int a[10][10], b[10][10], sum[10][10], r, c, i, j;
Printf ("enter rows");
Scanf ("%d", &c);
Printf ("enter a matrix");
for (i=0; i<r; i++)
  {
    for (j=0 j<c ;j++)
    {
    Scanf ("%d", &a[i][j]);
    }

}
Printf ("enter b matrix");
for (i=0; i<r; i++)
  {
    for (j=0;j<c;j++)
    {
    scanf ("%d", &b[i][j]);
```

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Date
Practical No.

```
}
Printf ("addition matrix");
for (i=0 i<r; i++)
 {
  for (j=0; j<c ;j++)
  {
  sum [i] [j] = a [i] [j] + b [i] [j];
  }
}
for (i=0;i<r; i++)
 {
  Printf ("\n");
  for (j=0;j< c;j++)
   {
    Printf("%d", sum[i][j]);
   }
  }
}
```

0/8

enter row 2
enter colum 2
enter a matri 2
2
2
2
enter b matri 2
4
4
addition matrix
6 6
6 6.

Kavya 02/6/24

Multiplication matrix

* write a c Program to perform the matrix of nxn multiplication

Algorithm

step 1 :- Start.

step 2 :- Declare variables a[10][10], b[10][10], c,i,j,k, mul[10][10]

step 3 :- Read row side (r) and column size (c)

step 4 :- for i=0 i<r inc by 1 then
for i=0 j<c inc by 1 then
read a matrix a[i][j]

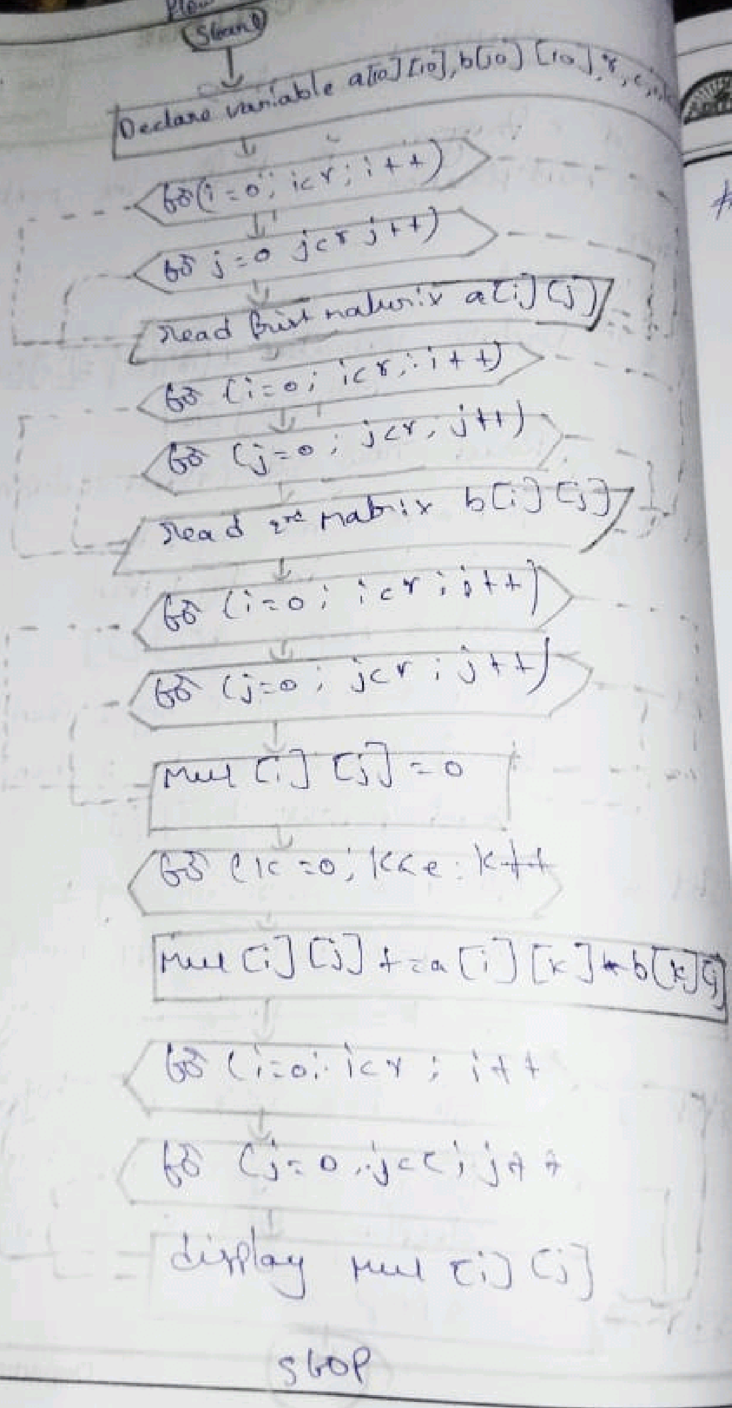
step 5 :- for i=0 i<r inc by 1 then
for j=0 j<c inc by 1 then
read matrix b[i][j]

step 6 :- for i=0 i<r inc by 1
for j=0 j<c inc by mul[i][j] = 0
for k=0; k<c inc by 1

step 7 :- for i=0 i<r inc by 1
for j=0 j<c inc by 1
display mul[i][j]

step 8 :- STOP.

Flow chart



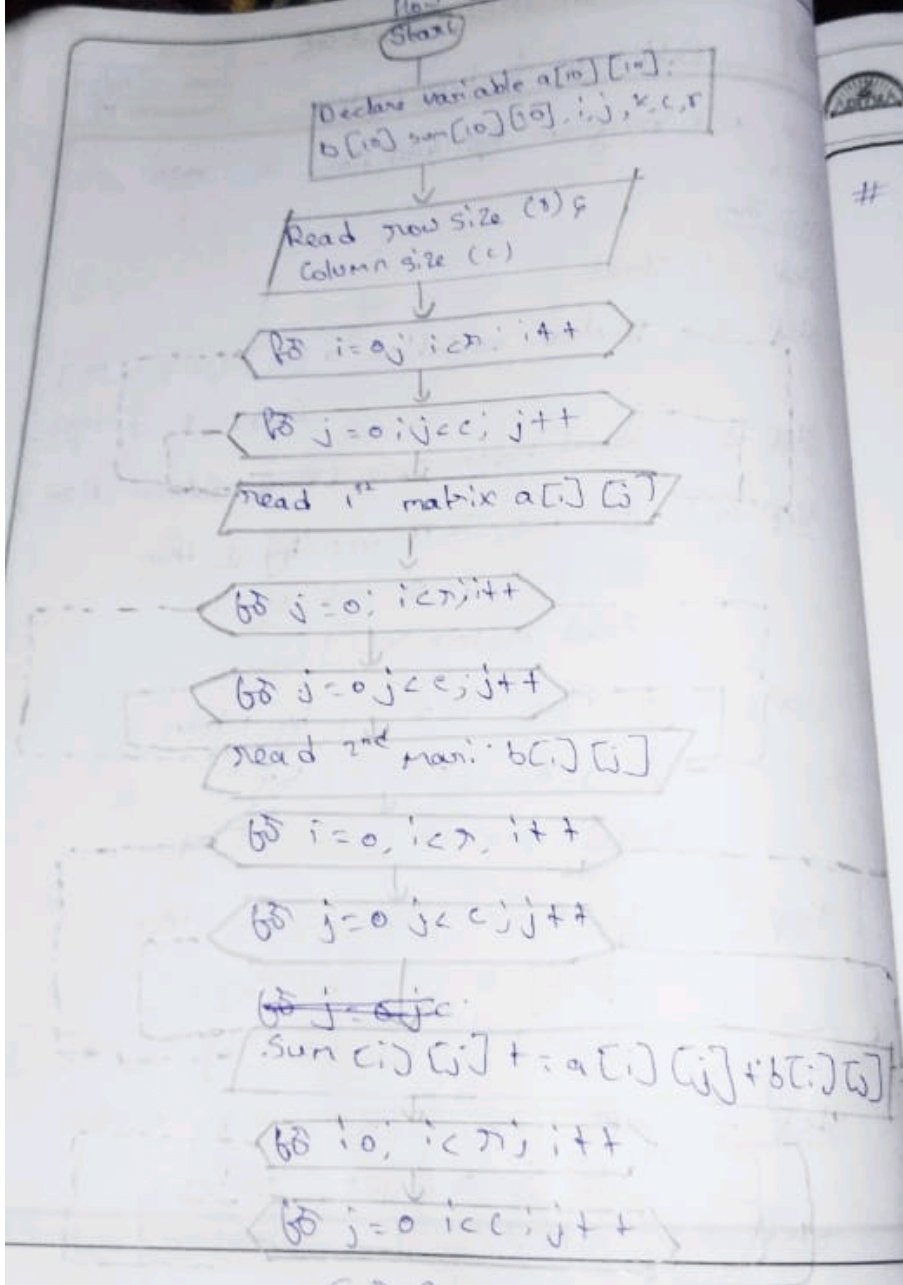
includ
int m
{
int
P

```
# include <stdio.h>
int main()
{
int a[10][10] b[10][10], mul[10][10], j, k, i, r, c;
Printf ("enter row size");
scanf ("%d", &n)
Printf ("enter Colum size");
scanf ("%d", &c);
Printf ("Enter 1st matrix");
for (i=0 i<n; i++)
{
for (j=0 j<c; j++)
{
scanf ("%d", &a[i][j]);
}
}
Printf ("enter 2nd matrix");
for (i=0 ; i<r ; i++)
{ for (j=0; j<c ; j++)
```

```
{
scanf("%d", &b[i][j]);
}
printf("matrix multiplication");
for(i=0; i<r; i++)
{
for(j=0; j<c; j++)
{
mul[i][j]=0;
for(k=0; k<c; k++)
{
mul[i][j]+=a[i][k]*b[k][j];
}
}
for(i=0; i<r; i++)
{
printf("\n");
for(j=0; j<c; j++)
{
printf("%d", mul[i][j]);
}
}
return 0;
}
```

Ramya 22/6/24.

Flow chart



ADI

include
int ma
{
int a
Printf
Scan
Print
fo

```
#include <stdio.h>
int main()
{
  int month;
  Printf("enter month");
  scanf("%d", &month);
switch (month)
{
    case 1:
    case 3:
    case 5:
    case 7:
    case 8:
    case 10:
    case 12:
  Printf("in 31 days");
    break;
    case 4;
    case 6;
    case 9:
    case 11;
  Printf("in 30 days");
```

ADITYA DEGREE COLLEGE

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Practical No. 10

switch (month)

- write a C- Program to display the no. of in day given month using switch case.

Algorithm

step 1 :- Start

step 2 :- Switch the value of month i.e switch and match with cases

step 3 :- There can be 12 possible values for months from 1 to 12

step 4 :- Print 31 for case 1, 3, 5, 7, 8, 10, 12

step 5 :- break

step 6 :- Print 30 for case 4, 6, 9, 11

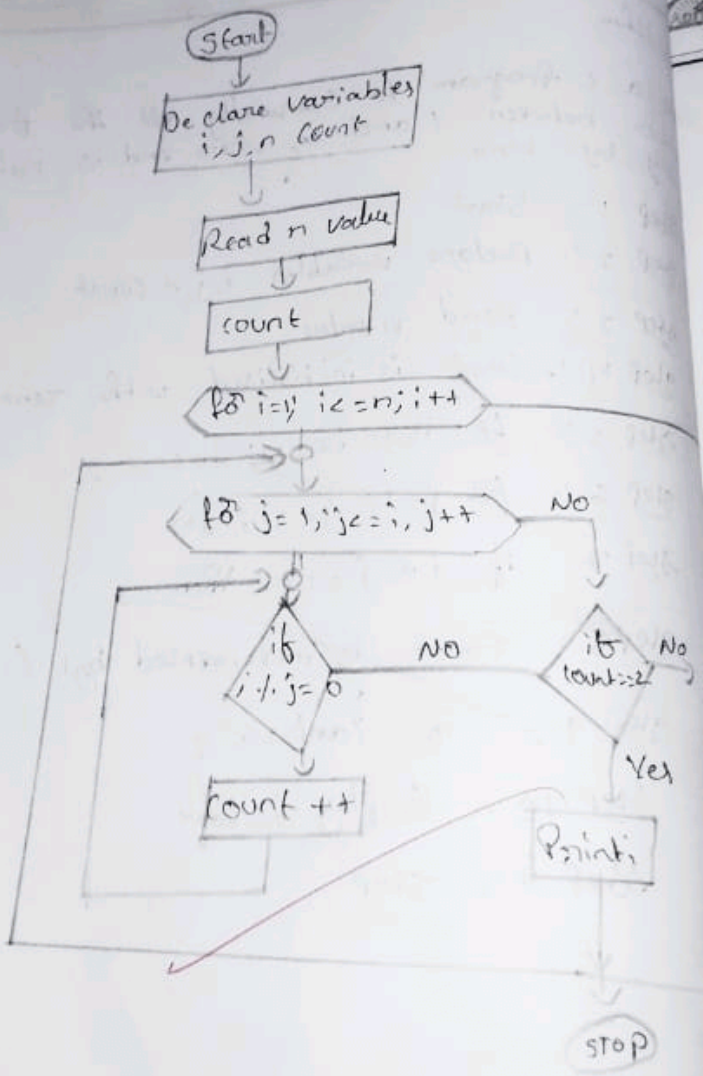
step 7 :- break

step 8 :- Print 28 for case 2

step 9 :- break.

step 10 :- STOP

Flow Chart



ADITY

Program

#include

int mai

{

int

Prin

scan

fo

Program

```
# include <stdio.h>
int main()
{
float a, b, c, result;
Printf ("Enter a value");
scanf ("%f %f %f", &a, &b, &c);
result = ((a*b)/c) + (a+b+c);
Printf = ("result of : %f", result);
return 0;
}
```

Output

enter a value 98769876
20.285713

Ramya 22/6/24

Program

```
# include <stdio.h>
int main()
{
  int n, i, count = 0;
  Printf("Enter n:");
  Scanf("%d", &n);
  for(i=1; i<=n; i++)
  {
    if (n%i==0)
    {
      count++;
    }
  }
  if (count==2)
  {
  Printf("Given no is Prime");
  }
  else
  {
  Printf("Given no is not Prime);
  }
  return 0;
  }
```

14/3/24

Program

```
# include <stdio.h>
int main ()
{
int hours, seconds;
Printf ("Enter a hours");
Scanf ("%d", & hours);
seconds = hours * 60 * 60
Printf ("%d", seconds);
return 0;
}
```

Output

enter a hours. 1

3600

enter a seconds 9

32400

13/3/24

Program

```
#include <stdio.h>
int main()
{
int n, temp, sum=0, rem;
printf("enter n:");
scanf("%d", &n);
temp = n;
while (n>0)
{
rem = n%10;
sum = (sum*10)+rem;
n= n/10;
}
if (temp==sum)
{
printf("Given no is Palindrome");
}
else
{
printf("Given no is not Palindrome");
}
return 0;
}
```

Output

enter n: 121
Given no is Palindrome

Enter n: 122.
Given no is not Palindrome.

Pad Sanjay 12/3/24.