**Coding Questions**

1. **Swap 2 numbers using 3rd variable**

**Code in C:**

#include <stdio.h>

void swap(int a, int b)

{

int c;

c = a;

a = b;

b = c;

printf("%d %d", a, b);

}

int main()

{

int a, b;

scanf("%d %d", &a, &b);

swap(a, b);

return 0;

}

**Code in C++:**

#include <iostream>

using namespace std;

void swap(int a, int b)

{

int c;

c = a;

a = b;

b = c;

cout<<a<<" "<<b;

}

int main()

{

int a, b;

cin>>a>>b;

swap(a, b);

return 0;

}

**Code in Python:**

a= int(input("Enter first number"))

b= int(input("Enter second number"))

c=a

a=b

b=c

print(a,b)

1. **Swap 2 numbers without 3rd variable :**

**Code in C:**

#include <stdio.h>

void swap(int a, int b)

{

a=a+b;

b=a-b;

a=a-b;

printf("%d %d", a, b);

}

int main()

{

int a, b;

scanf("%d %d", &a, &b);

swap(a, b);

return 0;

}

**Code in C++:**

#include<iostream>

using namespace std;

void swap(int a, int b)

{

a=a+b;

b=a-b;

a=a-b;

cout<<a<<" "<<b;

}

int main()

{

int a, b;

cin>>a>>b;

swap(a, b);

return 0;

}

**Code in Python:**

a= int(input("Enter first number: "))

b= int(input("Enter second number: "))

a=a+b

b=a-b

a=a-b

print(a,b)

1. **Swap 2 number using EXOR:**

**Code in C:**

#include <stdio.h>

void swap(int a, int b)

{

a=a^b;

b=a^b;

a=a^b;

printf("%d %d", a, b);

}

int main()

{

int a, b;

scanf("%d %d", &a, &b);

swap(a, b);

return 0;

}

**Code in C++:**

#include <iostream>

using namespace std;

void swap(int a, int b)

{

a=a^b;

b=a^b;

a=a^b;

cout<<a<<" "<<b;

}

int main()

{

int a, b;

cin>>a>>b;

swap(a, b);

return 0;

}

**Code in Python:**

a= int(input("Enter first number: "))

b= int(input("Enter second number: "))

a=a^b

b=a^b

a=a^b

print(a,b)

1. **Swap 3 numbers:**

**Code in C:**

#include<stdio.h>

void swap(int a,int b,int c){

a=a+b+c;

b=a-b-c;

c=a-b-c;

a=a-b-c;

printf("%d %d %d", a,b,c);

}

int main(){

int a ,b,c;

scanf("%d %d %d",&a,&b,&c);

swap(a,b,c);

return 0;

}

**Code in C++:**

#include<iostream>

using namespace std;

void swap(int a,int b,int c){

a=a+b+c;

b=a-b-c;

c=a-b-c;

a=a-b-c;

cout<<a<<" "<<b<<" "<<c;

}

int main(){

int a ,b,c;

cin>>a>>b>>c;

swap(a,b,c);

return 0;

}

**Code in Python:**

a=int(input("Enter first number "))

b=int(input("Enter second number: "))

c= int(input("Enter third number: "))

print(a,b,c)

a=a+b+c

b=a-b-c

c=a-b-c

a=a-b-c

print(a,b,c)

1. **Find Odd Even:**

**Code in C:**

#include<stdio.h>

void check(int a){

if(a%2==0){

printf("Even");

}

else{

printf("Odd");

}

}

int main(){

int a;

scanf("%d",&a);

check(a);

return 0;

}

**Code in C++:**

#include<iostream>

using namespace std;

void check(int a){

if(a%2==0){

cout<<"Even";

}

else{

cout<<"Odd";

}

}

int main(){

int a;

cin>>a;

check(a);

return 0;

}

**Code in Python:**

n= int(input("Enter a number : "))

if n%2==0:

print("even")

else:

print("odd")

1. **Check Leap Year:**

**Code in C:**

#include<stdio.h>

void leapYear(int a){

if(a%400==0){

printf("Leap Year");

}

else if(a%4==0 && a%100!=0){

printf("Leap Year");

}

else{

printf("Not Leap Year");

}

}

int main(){

int a;

printf("Enter the year: ");

scanf("%d",&a);

leapYear(a);

return 0;

}

**Code in C++:**

#include<iostream>

using namespace std;

void leapYear(int a){

if(a%400==0){

cout<<"Leap Year";

}

else if(a%4==0 && a%100!=0){

cout<<"Leap Year";

}

else{

cout<<"Not Leap Year";

}

}

int main(){

int a;

cout<<"Enter the year: ";

cin>>a;

leapYear(a);

return 0;

}

**Code in Python:**

n = int(input("Enter the year: "))

if n%400==0:

print("leap year")

elif n%4==0 and n%100 !=0 :

print("leap year")

else :

print("not a leap year")

1. **Sum of digits:**

**Code in C:**

#include <stdio.h>

int sum(int a)

{

int n = a, b, sum = 0;

while (a != 0)

{

b = a % 10;

sum += b;

a /= 10;

}

return sum;

}

int main()

{

int n, ans;

scanf("%d", &n);

ans = sum(n);

printf("%d", ans);

return 0;

}

**Code in C++:**

#include <iostream>

using namespace std;

int sum(int a)

{

int n = a, b, sum = 0;

while (a != 0)

{

b = a % 10;

sum += b;

a /= 10;

}

return sum;

}

int main()

{

int n, ans;

cin>>n;

ans = sum(n);

cout<<ans;

return 0;

}

**Code in Python:**

n=int(input("Enter a number: "))

sum=0

while(n):

b=n%10

sum=sum+b

n=n//10

print(sum)

1. **Reverse a number:**

**Code in C:**

#include<stdio.h>

int reverse(int a){

int sum=0,b;

while(a!=0){

b=a%10;

sum=(sum\*10)+b;

a=a/10;

}

return sum;

}

int main(){

int a , ans;

scanf("%d",&a);

ans = reverse(a);

printf("%d",ans);

return 0;

}

**Code in C++:**

#include<iostream>

using namespace std;

int reverse(int a){

int sum=0,b;

while(a!=0){

b=a%10;

sum=(sum\*10)+b;

a=a/10;

}

return sum;

}

int main(){

int a , ans;

cin>>a;

ans = reverse(a);

cout<<ans;

return 0;

}

**Code in Python:**

n=int(input("Enter a number: "))

a=n

sum=0

while(n):

b=n%10

sum=(sum\*10)+b

n=n//10

print(sum)

1. **Palindrome number:**

**Code in C:**

#include<stdio.h>

void palindrome(int n){

int a=n,sum=0,b;

while (n!=0)

{

b=n%10;

sum=(sum\*10)+b;

n/=10;

}

if (a==sum)

{

printf("Palindrome");

}

else{

printf("Not palindrome");

}

}

int main(){

int a;

scanf("%d",&a);

palindrome(a);

return 0;

}

**Code on C++:**

#include<iostream>

using namespace std;

void palindrome(int n){

int a=n,sum=0,b;

while (n!=0)

{

b=n%10;

sum=(sum\*10)+b;

n/=10;

}

if (a==sum)

{

cout<<"Palindrome";

}

else{

cout<<"Not palindrome";

}

}

int main(){

int a;

cin>>a;

palindrome(a);

return 0;

}

**Code in Python:**

n=int(input("Enter a number: "))

a=n

sum=0

while(n):

b=n%10

sum=(sum\*10)+b

n=n//10

print(sum)

if(a==sum):

print("Pelindrome")

else:

print("Not a pelindrome")

1. **Factorial of a number:**

**Code in C:**

#include<stdio.h>

int factorial(int a){

int fact=1;

while(a!=0){

fact\*=a;

a--;

}

return fact;

}

int main(){

int a , ans;

scanf("%d",&a);

ans = factorial(a);

printf("%d",ans);

return 0;

}

**Code in C++:**

#include<iostream>

using namespace std;

int factorial(int a){

int fact=1;

while(a!=0){

fact\*=a;

a--;

}

return fact;

}

int main(){

int a , ans;

cin>>a;

ans = factorial(a);

cout<<ans;

return 0;

}

**Code in Python:**

n=int(input("Enter a nummber: "))

fact=1

while(n!=0):

fact=fact\*n

n=n-1

print(fact)

1. **Strong Number:**

**Code in C:**

#include<stdio.h>

int factorial(int a){

int fact=1;

while(a!=0){

fact\*=a;

a--;

}

return fact;

}

void strong(int a){

int sum=0,b, n=a;

while (a!=0)

{

b=a%10;

sum = sum+factorial(b);

a=a/10;

}

if (sum==n )

{

printf("Strong number");

}

else{

printf("Not strong number");

}

}

int main(){

int a;

scanf("%d",&a);

strong(a);

return 0;

}

**Code in C++:**

#include <iostream>

using namespace std;

int factorial(int a)

{

int fact = 1;

while (a != 0)

{

fact \*= a;

a--;

}

return fact;

}

void strong(int a)

{

int sum = 0, b, n = a;

while (a != 0)

{

b = a % 10;

sum = sum + factorial(b);

a = a / 10;

}

if (sum == n)

{

cout << "Strong number";

}

else

{

cout << "Not strong number";

}

}

int main()

{

int a;

cin >> a;

strong(a);

return 0;

}

**Code in Python:**

def factorial(a):

fact=1

while(a):

fact=fact\*a

a=a-1

return fact

def isStrong(a):

sum=0

n=a

while(a):

b=a%10

sum=sum+factorial(b)

a=a//10

if (sum==n):

return True

return False

n= int(input("Enter a number: "))

ans= isStrong(n)

print(ans)

1. **Sunny Number:**

**Code in C:**

#include<stdio.h>

#include<math.h>

int main(){

int n,a,y;

float x;

scanf("%d",&n);

a=n+1;

x=sqrt(a);

y= (int)x;

if (x==y)

{

printf("Sunny Number");

}

else{

printf("Not a sunny number");

}

return 0;

}

**Code in Python:**

from math import sqrt

def isSunny(n):

n+=1

x=sqrt(n)

y=int(x)

if(x==y):

return True

return False

n=int(input("Enter number: "))

x=isSunny(n)

print(x)

1. **Prime number:**

**Code in C:**

#include <stdio.h>

#include <math.h>

int prime(int n)

{

if (n <= 1)

{

return 0;

}

int x = sqrt(n);

int i = 2;

while (i <= x)

{

if (n % i == 0)

{

return 0;

}

i++;

}

return 1;

}

int main(){

int a;

scanf("%d",&a);

int ans = prime(a);

if (ans==0)

{

printf("Not Prime");

}

else{

printf("Prime");

}

return 0;

}

**Code in Python:**

from math import sqrt

def prime(n):

if(n<=1):

return False

i=2

end=int(sqrt(n))

for i in range(2,end+1,1):

if(n%i==0):

return False

return True

n= int(input("Enter a number: "))

print(prime(n))

1. **LCM of 2 Numbers:**

**Code in C:**

#include<stdio.h>

int lcm(int a,int b){

if(a==b){

return a;

}

int max;

if (a>b){

max=a;

}

else{

max=b;

}

int i=max;

while (1)

{

if (max%a==0&&max%b==0)

{

return max;

}

max=max+i;

}

}

int main(){

int a,b,ans;

scanf("%d%d",&a,&b);

ans=lcm(a,b);

printf("%d",ans);

return 0;

}

**Code in Python:**

def lcm(a, b):

if a == b:

return a

if a < b:

max\_value = b

if b < a:

max\_value = a

i = max\_value

while True:

if max\_value % a == 0 and max\_value % b == 0:

return max\_value

max\_value += i

a = int(input("Enter first number: "))

b = int(input("Enter first number: "))

ans = lcm(a,b)

print(ans)

1. **Automorphic Number:**

**Code in C:**

#include<stdio.h>

int autom(int n){

int sq =n\*n;

while (n!=0)

{

if (n%10!=sq%10)

{

return 0;

}

n=n/10;

sq=sq/10;

}

return 1;

}

int main(){

int a,ans;

scanf("%d",&a);

ans=autom(a);

if (ans==1){

printf("Automorphic");

}

else{

printf("Not Automorphic");

}

return 0;

}

**Code in Python:**

def is\_automorphic(n):

sq = n \* n

while n != 0:

if n % 10 != sq % 10:

return False

n //= 10

sq //= 10

return True

a = int(input("Enter a number: "))

if is\_automorphic(a):

print("Automorphic")

else:

print("Not Automorphic")

1. **Print Fibonacci Series:**

**Code in C:**

#include <stdio.h>

void fibonacci(int n) {

if (n == 1) {

printf("0\n");

} else if (n == 2) {

printf("0\n");

printf("1\n");

} else {

printf("0\n");

printf("1\n");

n = n - 2;

int a = 0, b = 1, c;

while (n!=0) {

c = a + b;

printf("%d\n", c);

a = b;

b = c;

n--;

}

}

}

int main() {

int n;

printf("Enter the number of terms: ");

scanf("%d", &n);

fibonacci(n);

return 0;

}

**Code in Python:**

def fibonacci(n):

if(n==1):

print(0)

elif(n==2):

print(0)

print(1)

else:

print(0)

print(1)

n=n-2

a=0

b=1

while(n):

c=a+b

print(c)

a=b

b=c

n=n-1

n=int(input("Enter the number of terms: "))

fibonacci(n)

1. **A number belongs to Fibonacci series or not :**

**Code in C:**

#include<stdio.h>

int isFibonacci(int n){

if (n==0 || n==1)

{

return 1;

}

int a=0;

int b=1;

int c=a+b;

while (1)

{

if (n==c)

{

return 1;

}

if (c>n)

{

return 0;

}

a=b;

b=c;

c=a+b;

}

}

int main(){

int a,ans;

scanf("%d",&a);

ans=isFibonacci(a);

if (ans==1)

{

printf("Fibonacci Number");

}

else{

printf("Not a Fibonacci Number");

}

return 0;

}

**Code in Python:**

def inFibonacci(n):

if(n==0 or n==1):

return True

a=0

b=1

while(1):

c=a+b

if(c==n):

return True

if(c>n):

return False

a=b

b=c

n= int(input("Enter a number: "))

print(inFibonacci(n))

1. **Nth Prime Number:**

**Code in C:**

#include <stdio.h>

#include <math.h>

int isPrime(int n)

{

if (n <= 1)

{

return 0;

}

int i = 2;

int j = sqrt(n);

while (i <= j)

{

if (n % i == 0)

{

return 0;

}

i++;

}

return 1;

}

int main()

{

int a, ans, count = 0, x = 2, temp;

scanf("%d", &a);

while (1)

{

if (isPrime(x) == 1)

{

count++;

}

if (count == a)

{

printf("%d", x);

break;

}

x++;

}

return 0;

}

**Code in Python:**

import math

def isPrime(n):

if n <= 1:

return False

i = 2

j = int(math.sqrt(n))

while i <= j:

if n % i == 0:

return False

i += 1

return True

a = int(input("Enter the number: "))

count = 0

x = 2

while True:

if isPrime(x):

count += 1

if count == a:

print(x)

break

x += 1

1. **Armstrong Number or not:**

**Code in C:**

#include <stdio.h>

#include <math.h>

int isAmstrong(int n)

{

int count = 0, a = n, b;

float sum = 0;

while (n != 0)

{

count++;

n /= 10;

}

n = a;

while (n != 0)

{

b = n % 10;

sum += pow(b, count);

n /= 10;

}

if (sum == a)

{

return 1;

}

return 0;

}

int main()

{

int a;

scanf("%d", &a);

int ans = isAmstrong(a);

if (ans == 0)

{

printf("Not Armstrong");

}

else

{

printf("Armstrong");

}

return 0;

}

**Code in Python:**

n=int(input("Enter a number: "))

a=n

count=0

while(n!=0):

n=n//10

count=count+1

sum=0

n=a

while(n):

b=n%10

sum=sum+(b\*\*count)

n=n//10

if(sum==a):

print("Amstrong Number")

else:

print("Not Amstrong")

1. **Check Spy Number:**

**Code in C:**

#include <stdio.h>

#include <math.h>

int isSpy(int n)

{

int sum=0,prod=1,b;

while (n!=0)

{

b= n%10;

sum=sum+b;

prod=prod\*b;

n/=10;

}

if (sum==prod)

{

return 1;

}

return 0;

}

int main(){

int a,ans;

scanf("%d",&a);

ans=isSpy(a);

if (ans==1)

{

printf("Spy Number");

}

else{

printf("Not Spy Number");

}

return 0;

}

**Code in Python:**

n=int(input("Enter a number: "))

sum=0

prod=1

while(n!=0):

b=n%10

sum=sum+b

prod=prod\*b

n=n//10

if(sum==prod):

print("Spy Number")

else:

print("Not Spy Number")

**Assignment – 1 Questions:**

1. **Print even number from 1-100 :**

**Code in C:**

#include<stdio.h>

int main(){

printf("All even numbers from 1 to 100: \n");

int i =0;

while(i<=100)

{ if(i%2==0){

printf("%d\n",i);

}

i++;

}

return 0;

}

**Code in Python:**

print("All even numbers from 1 to 100:")

i = 0

while i <= 100:

if i % 2 == 0:

print(i)

i += 1

1. **Print odd numbers from 1-100 :**

**Code in C:**

#include<stdio.h>

int main(){

printf("All odd numbers from 1 to 100: \n");

int i =0;

while(i<=100)

{ if(i%2!=0){

printf("%d\n",i);

}

i++;

}

return 0;

}

**Code in Python:**

print("All odd numbers from 1 to 100:")

i = 0

while i <= 100:

if i % 2 != 0:

print(i)

i += 1

1. **Greatest of three numbers:**

**Code in C:**

#include<stdio.h>

int greatest(int a,int b,int c){

if (a>=b&&a>=c)

{

return a;

}

else if (b>=a&&b>=c)

{

return b;

}

else if (c>=b&&c>=a)

{

return c;

}

}

int main(){

int a,b,c,ans;

scanf("%d%d%d",&a,&b,&c);

ans=greatest(a,b,c);

printf("%d",ans);

return 0;

}

**Code in Python:**

def greatest(a, b, c):

if a >= b and a >= c:

return a

elif b >= a and b >= c:

return b

else:

return c

a=int(input("Enter 1st number: "))

b=int(input("Enter 2nd number: "))

c=int(input("Enter 3rd number: "))

ans = greatest(a, b, c)

print(ans)

1. **Table of &:**

**Code in C:**

#include<stdio.h>

int main(){

printf("Table of 7: \n");

int i =1;

while(i<=10)

{

printf("%d\n",i\*7);

i++;

}

return 0;

}

**Code in Python:**

print("Table of 7:")

i = 1

while i <= 10:

print(i \* 7)

i += 1

1. **Sum of first n natural number:**

**Code in C:**

#include<stdio.h>

int main(){

int n,sum;

scanf("%d",&n);

printf("Sum of %d natural numbers is: ",n);

sum = n\*(n+1)/2;

printf("%d",sum);

return 0;

}

**Using Loop:**

#include<stdio.h>

int main(){

int i =1,sum=0,n;

scanf("%d",&n);

printf("Sum of %d natural numbers is: ",n);

while(i<=n)

{

sum=sum+i;

i++;

}

printf("%d",sum);

return 0;

}

**Code in Python:**

n = int(input("Enter a number: "))

sum = n \* (n + 1) // 2

print(f"Sum of {n} natural numbers is: {sum}")

**Using loop:**

n = int(input("Enter a number: "))

i = 1

sum = 0

print(f"Sum of {n} natural numbers is:")

while i <= n:

sum += i

i += 1

print(sum)

1. **Sum of squares of first n natural numbers.**

**Code in C:**

#include<stdio.h>

int main(){

int n,sum;

scanf("%d",&n);

printf("Sum of squares of %d natural numbers is: ",n);

sum = n\*(n+1)\*((2\*n)+1)/6;

printf("%d",sum);

return 0;

}

**Code in Python:**

n = int(input("Enter a number: "))

sum = n \* (n + 1) \* (2 \* n + 1) // 6

print(f"Sum of squares of {n} natural numbers is: {sum}")

1. **Sum of cubes of n natural numbers.**

**Code in C:**

#include<stdio.h>

int main(){

int n,sum;

scanf("%d",&n);

printf("Sum of cubes of %d natural numbers is: ",n);

sum = (n\*(n+1)/2)\*(n\*(n+1)/2);

printf("%d",sum);

return 0;

}

**Code in Python:**

n = int(input("Enter a number: "))

sum = (n \* (n + 1) // 2) \*\* 2

print(f"Sum of cubes of {n} natural numbers is: {sum}")

1. **Find whether a number is divisible by 8 or not.**

**Code in C:**

#include<stdio.h>

int divisible(int a){

if (a%8==0)

{

return 1;

}

return 0;

}

int main(){

int n,ans;

scanf("%d",&n);

ans=divisible(n);

if (ans==1)

{

printf("Divisible by 8");

}

else{

printf("Not divisible by 8");

}

return 0;

}

**Code in Python:**

def divisible(a):

if a % 8 == 0:

return 1

return 0

n = int(input("Enter a number: "))

ans = divisible(n)

if ans == 1:

print("Divisible by 8")

else:

print("Not divisible by 8")

1. **Greatest of 4 numbers.**

**Code in C:**

#include <stdio.h>

int greatest(int a, int b, int c, int d)

{

int max = a;

if (b >= max)

{

max = b;

}

if (c >= max)

{

max = c;

}

if (d >= max)

{

max = d;

}

return max;

}

int main()

{

int a, b, c, d, ans;

scanf("%d%d%d%d", &a, &b, &c, &d);

ans = greatest(a, b, c, d);

printf("%d", ans);

return 0;

}

**Code in Python:**

def greatest(a, b, c, d):

max\_value = a

if b >= max\_value:

max\_value = b

if c >= max\_value:

max\_value = c

if d >= max\_value:

max\_value = d

return max\_value

# Taking input one by one

a = int(input("Enter first number: "))

b = int(input("Enter second number: "))

c = int(input("Enter third number: "))

d = int(input("Enter fourth number: "))

ans = greatest(a, b, c, d)

print("The greatest number is:", ans)

1. **Grade System**

**91-100 A+**

**81-90 A**

**71-80 B+**

**61-70 B**

**33-60 C**

**<33 Fail**

**>100 Invalid input**

**Code in C:**

#include<stdio.h>

int main(){

int marks;

printf("Enter marks: ");

scanf("%d",&marks);

if (marks<101)

{

printf("Invalid Input");

}

else if (marks>90)

{

printf("Grade: A+");

}

else if (marks>80)

{

printf("Grade: A");

}

else if (marks>70)

{

printf("Grade: B+");

}

else if (marks>60)

{

printf("Grade: B");

}

else if (marks>33)

{

printf("Grade: C");

}

else if (marks>0)

{

printf("Grade: Fail");

}

else

{

printf("Invalid Input");

}

return 0;

}

**Code in Python:**

marks = int(input("Enter marks: "))

if marks < 0 or marks > 100:

print("Invalid Input")

elif marks > 90:

print("Grade: A+")

elif marks > 80:

print("Grade: A")

elif marks > 70:

print("Grade: B+")

elif marks > 60:

print("Grade: B")

elif marks > 33:

print("Grade: C")

else:

print("Grade: Fail")

1. **Print Nth Armstrong Number:**

**Code in C:**

#include <stdio.h>

#include <math.h>

int isAmstrong(int n)

{

int count =0,a=n,b;

float sum=0;

while (n!=0)

{

count++;

n/=10;

}

n=a;

while (n!=0)

{

b= n%10;

sum=sum+pow(b,count);

n/=10;

}

if (sum==a)

{

return 1;

}

return 0;

}

int main()

{

int a, ans, count = 0, x = 1, temp;

scanf("%d", &a);

while (1)

{

if (isAmstrong(x) == 1)

{

count++;

}

if (count == a)

{

printf("%d", x);

break;

}

x++;

}

return 0;

}

1. **Print nth Automorphic Number:**

**Code in C:**

#include <stdio.h>

#include <math.h>

int isAutomorphic(int n){

int sq =n\*n;

while (n!=0)

{

if (n%10!=sq%10)

{

return 0;

}

n=n/10;

sq=sq/10;

}

return 1;

}

int main()

{

int a, ans, count = 0, x = 1, temp;

scanf("%d", &a);

while (1)

{

if (isAutomorphic(x) == 1)

{

count++;

}

if (count == a)

{

printf("%d", x);

break;

}

x++;

}

return 0;

}

1. **Print nth Fibonacci Number:**

**Code in C:**

#include<stdio.h>

int isFibonacci(int n){

if (n==0 || n==1)

{

return 1;

}

int a=0;

int b=1;

int c=a+b;

while (1)

{

if (n==c)

{

return 1;

}

if (c>n)

{

return 0;

}

a=b;

b=c;

c=a+b;

}

}

int main()

{

int a, ans, count = 0, x = 1, temp;

scanf("%d", &a);

while (1)

{

if (isFibonacci(x) == 1)

{

count++;

}

if (count == a)

{

printf("%d", x);

break;

}

x++;

}

return 0;

}

1. **Print nth Palindrome Number:**

**Code in C:**

#include <stdio.h>

#include <math.h>

int isPalindrome(int n){

int a=n,sum=0,b;

while (n!=0)

{

b=n%10;

sum=(sum\*10)+b;

n/=10;

}

if (a==sum)

{

return 1;

}

else{

return 0;

}

}

int main()

{

int a, ans, count = 0, x = 1, temp;

scanf("%d", &a);

while (1)

{

if (isPalindrome(x) == 1)

{

count++;

}

if (count == a)

{

printf("%d", x);

break;

}

x++;

}

return 0;

}

1. **Print nth Spy Number:**

**Code in C:**

#include <stdio.h>

#include <math.h>

int isSpy(int n)

{

int sum=0,prod=1,b;

while (n!=0)

{

b= n%10;

sum=sum+b;

prod=prod\*b;

n/=10;

}

if (sum==prod)

{

return 1;

}

return 0;

}

int main()

{

int a, ans, count = 0, x = 1, temp;

scanf("%d", &a);

while (1)

{

if (isSpy(x) == 1)

{

count++;

}

if (count == a)

{

printf("%d", x);

break;

}

x++;

}

return 0;

}

1. **Print nth Strong Number:**

**Code in C:**

#include <stdio.h>

#include <math.h>

int factorial(int a){

int fact=1;

while(a!=0){

fact\*=a;

a--;

}

return fact;

}

int isStrong(int a){

int sum=0,b, n=a;

while (a!=0)

{

b=a%10;

sum = sum+factorial(b);

a=a/10;

}

if (sum==n )

{

return 1;

}

else{

return 0;

}

}

int main()

{

int a, ans, count = 0, x = 1, temp;

scanf("%d", &a);

while (1)

{

if (isStrong(x) == 1)

{

count++;

}

if (count == a)

{

printf("%d", x);

break;

}

x++;

}

return 0;

}

1. **Print nth Sunny Number:**

**Code in C:**

#include <stdio.h>

#include <math.h>

int isSunny(int n)

{

int a;

float x;

a=n+1;

x=sqrt(a);

if (x==(int)x)

{

return 1;

}

return 0;

}

int main()

{

int a, ans, count = 0, x = 1, temp;

scanf("%d", &a);

while (1)

{

if (isSunny(x) == 1)

{

count++;

}

if (count == a)

{

printf("%d", x);

break;

}

x++;

}

return 0;

}