Type 1-Ass1

// Finding F from C (temp).

```c
#include<stdio.h>

void temp(){
    float celcius, farahnite;

    printf("Enter a temp :");
    scanf("%f", &celcius);

    farahnite = (celcius*9/5)+32;

    printf("Given temp in farhanite is %f",farahnite);
}
int main(){
    temp();

}
```

// Finding area and perimeter of rectangle or circle.

```c
#include<stdio.h>
void Circle(){

    int radius , perimeter,area;

    printf("Enter a radius :");
    scanf("%d", &radius);

    area = 3.14*radius*radius;
    printf("area of circle is  : %d \n",area);
```

```c
    perimeter = 3.14*2*radius;
    printf("perimeter of circle is : %d",perimeter);


}


int main(){
    Circle();
}
```

// Accept a 3 digit number from user and find the sum of the digits and also reverse the number

```c
#include <stdio.h>

void Digit() {
    int num, sum = 0, rev = 0, temp;


    printf("Enter a 3-digit number: ");
    scanf("%d", &num);


    if (num >= 100 && num <= 999) {
        temp = num;
        while (temp > 0) {
            sum += temp % 10;
            rev = rev * 10 + temp % 10;
            temp /= 10;
        }


        printf("Sum of digits: %d\n", sum);
        printf("Reverse of the number: %d\n", rev);
    } else {
        printf("Enter a valid 3-digit number.\n");
```

```c
    }

}
int main(){
    Digit();
}
```

// Check if the given number is even or odd.

```c
#include<stdio.h>

void EVENODD(){
    int num;

    printf("Enter a number :");
    scanf("%d", &num);

    if (num%2==0)
    printf("Even");
    else
    printf("Odd");
}

void main(){
    EVENODD();
}
```

// Calculating total salary based on basic. If basic <=5000 da, ta and hra will be
// 10%,20% and 25% respectively otherwise da, ta and hra will be 15%,25% and
// 30% respectively.

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

```c
void Salary(){
    int salary,DA,TA,HRA,total=0;

    printf("Enter a basics salary :");
    scanf("%d", &salary);

    if (salary <= 5000)
    {
        DA = salary*0.1;
        TA = salary*0.2;
        HRA = salary*0.25;

        total = salary+DA+TA+HRA;
        printf("Total Salary :%d",total);
    }else{
        DA = salary*0.15;
        TA = salary*0.25;
        HRA = salary*0.30;

        total = salary+DA+TA+HRA;
        printf("Total Salary :%d",total);
    }

}

void main(){
    Salary();
}

// Write a program to check if person is eligible to marry or not (male age >=21
//   and female age>=18).
```

```c
#include<stdio.h>

void Marry(){
    int fage, mage;

    printf("Enter female age :");
    scanf("%d", &fage);

    printf("Enter male age :");
    scanf("%d", &mage);

    if(mage >=21 && fage >=18)
    printf("Both eligible");
    else if(mage <=21 && fage<=18)
    printf("Both r not eligible");
    else if (mage<=21 || fage>=18)
     printf("male not eligible , female eligble");
     else if(mage >=21 || fage<=18)
     printf("female not eligible , male eligble");
}

void main(){
    Marry();
}
```

Type 1-Ass2

// 1. Find the price of item when discount is given (specify different discount based on

// price)

```c
#include<stdio.h>
void Discount(){
int price = 200;

float dis;

int finalprice;

if(price < 500){
    dis = price * 0.1;
}else if(price <1000){
    dis  = price * 0.2;
}else if (price < 2000){
    dis = price *0.3;
}else{
    dis=0;
}

 finalprice = price - dis;

printf("Price: %d\n",price);
printf("Discount: %f\n", dis);
printf("Final Price: %d\n", finalprice);

}
void main(){
  Discount();
}
```

// Write a program to find greatest of three numbers using nested if-else.

```c
#include<stdio.h>

void Comparison(){
    int a=5 , b=60 , c=9;

    if(a>b){
        if(a>c){
            printf("a is greater than b and  c ");
        }else{
            printf(" C is greater greater than  b ");
        }
    }else if(b>c){
        printf("b is greater c and a ");
    }else{
        printf("c is  greater than a and c");
    }
}

void main(){
  Comparison();
}
```

// Accept two numbers from user and an operator (+,-,/,*,%) based on that
// perform the desired operations.

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

```c
int Opration() {
    int a = 10;
    int b = 3;
    int res;
    char op = '*';


    if (op == '*') {
        res = a * b;
    } else if (op == '/') {
        if (b == 0) {
            printf("Error\n");
            return 1;
        }
        res = a / b;
    } else if (op == '+') {
        res = a + b;
    } else if (op == '-') {
        res = a - b;
    } else if (op == '%') {
        if (b == 0) {
            printf("Error\n");
            return 1;
        }
        res = a % b;
    } else {
        printf("Error\n");
    }


    printf("Result is :%d\n", res);
}


int main(){
```

```c
    Opration();
}


// Display a menu to the user (like 1.Even Odd 2. Basic salary etc), ask the user to
// enter his choice, then based on that perform the desired operations.

#include<stdio.h>

int Salary(){
    int choice;

    printf("Menu:\n1.Even/Odd\n2.Basic Salary\n ");
    printf("Enter your choice:");
    scanf("%d", &choice);

    if(choice == 1){
    printf("Even /  Odd");
    }else if (choice == 2){
        printf("Basic Salary ");
    }else{
        printf("Error");
    }
}

int main(){
 Salary();
}



// Accept the price from user. Ask the user if he is a student (user may say yes or
// no). If he is a student and he has purchased more than 500 than discount is 20%
// otherwise discount is 10%. But if he is not a student then if he has purchased
```

```c
// more than 600 discount is 15% otherwise there is not discount.

#include <stdio.h>

int offer() {
    float price, discount;
    char Student;

    printf("Enter the price: ");
    scanf("%f", &price);
    printf("Are you a student? (y/n): ");
    scanf(" %c", &Student);
    if (Student == 'y' || Student == 'Y') {
        if (price > 500) {
            discount = price * 0.2;
        } else {
            discount = price * 0.1;
        }
    } else if (Student == 'n' || Student == 'N') {
        if (price > 600) {
            discount = price * 0.15;
        }
    } else {
        printf("Invalid");
    }
    float finalPrice = price - discount;
    printf("Final price : %f\n", finalPrice);
}

int main(){
  offer();
}
```

Type 1-Ass3

```c
// Print numbes from 1 to 10.
#include<stdio.h>

int Num(){
// int a=1;
// while (a<=10)
// {
//   printf("%d\n", a);
//   a++;
// }

for(int i=1;i<=10;i++){
  printf("%d\n", i);
}


}


int main(){
   Num();
}



// Print table for the given number.

#include<stdio.h>

int Table() {
   int a, i = 1;

   printf("Enter a number: ");
   scanf("%d", &a);
```

```c
    while (i <= 10) {
        printf(" %d\n", a * i);
        i++;
    }


}
int main(){
    Table();
}
```

// Calculate sum of numbers in the given range.

```c
#include<stdio.h>

int Sum(){
    int start , end ,sum=0;

    printf("Enter the staring number :");
    scanf("%d" ,  &start);

    printf("Enter the ending number :");
    scanf("%d" ,  &end);

    if(start>end){
        return 1;
    }

    // while (start <= end)
    // {
    //    sum+=start;
```

```c
//    start++;
// }

    for(int i=start;i<=end;i++){
        sum +=i;
    }
    printf("Total sum is : %d", sum);

}


int main(){
    Sum();
}



// Check number is prime or not.
#include<stdio.h>

int Prime() {
    int num, i = 2, isprime = 1;

    printf("Enter the number to check prime or not: ");
    scanf("%d", &num);

    if (num <= 1) {
        printf("Not prime");
    }

    for(int i=2;i<=num/2;i++){
        if (num % i == 0) {
            isprime = 0;
            break;
```

```c
        }
    }

    // while (i <= num / 2) {
    //     if (num % i == 0) {
    //         isprime = 0;
    //         break;
    //     }
    //     i++;
    // }
    if (isprime) {
        printf("Prime");
    } else {
        printf("Not prime");
    }


    return 0;
}

int main(){
    Prime();
}


// Check number is armstrong or not?

#include<stdio.h>

int Armstrong() {
    int num, originalNum, sum = 0, digit, count = 0, temp;

    printf("Enter a number :");
```

```c
    scanf("%d", &num);

    originalNum = num;
    temp = num;

    //for digit count
    while(temp >0){
        temp /=10;
        count++;
    }

    temp=num;

    while (temp > 0) {
        digit = temp % 10;
        int power = 1;
        for (int i = 0; i < count; i++) {
            power *= digit;
        }

        sum += power;
        temp /= 10;
    }

    if (sum == originalNum)
        printf("%d is Armstrong number.\n", num);
    else
        printf("%d is not Armstrong number.\n", num);
}
int main(){
    Armstrong();
}
```

// *Check number is perfect or not.*

```c
#include<stdio.h>

int Perfect(){
    int num , fact=0;

    printf("Enter a number :");
    scanf("%d",&num);

    for(int i=1;i<num;i++){
        if(num%i==0){
            fact +=i;
        }
    }

    if(num==fact)
     printf("%d is perfect number",num);
     else
     printf("%d is not perfect number",num);
}

int main(){
    Perfect();
}
```

// *Find factorial of number.*

```c
#include<stdio.h>

int Fact(){
```

```c
    int num , fact=1;

    printf("Enter a number :");
    scanf("%d",&num);

    for(int i=1; i<=num;i++){
        fact*=i;

    }
    printf(" Factorial of %d is : %d",num,fact);
}

int main(){
    Fact();
}
```

// Check number is strong or not.

```c
#include <stdio.h>

int Strong() {
    int num, originalNum, digit, sum = 0;

    printf("Enter a number: ");
    scanf("%d", &num);

    originalNum=num;

    while (num > 0) {
        digit = num % 10;
        int fact = 1;
```

```c
        for (int i = 1; i <= digit; i++) {
            fact *= i;
        }

        sum += fact;
        num /= 10;
    }

    if (sum == originalNum)
        printf("%d is a Strong Number.\n", originalNum);
    else
        printf("%d is not a Strong Number.\n", originalNum);

}


int main(){
    Strong();
}
```

// Check the given number is palindrome or not?

```c
#include <stdio.h>

int palindrome() {
    int num, originalNum, reversedNum = 0, digit;

    printf("Enter a number: ");
    scanf("%d", &num);

    originalNum = num;
```

```c
    while (num>0) {
        digit = num % 10;
        reversedNum = reversedNum * 10 + digit;
        num /= 10;
    }

    if (originalNum == reversedNum)
        printf("%d is a Palindrome.\n", originalNum);
    else
        printf("%d is Not a Palindrome.\n", originalNum);

}


int main(){
    palindrome();
}
```

// Add the (first and last) digit of a given number?

```c
#include <stdio.h>

int Summ() {
    int num, firstDigit, lastDigit;

    printf("Enter a number: ");
    scanf("%d", &num);

    lastDigit = num % 10;
    firstDigit = num;
```

```c
    while (firstDigit >= 10) {
        firstDigit /= 10;
    }
    return firstDigit+ lastDigit;

}
int main(){
    printf("Sum of first and last digit: %d",Summ());

}
```

Type 1-Ass4

// Print armstrong number in the the given range 1 to n?

```c
#include <stdio.h>

int Arm() {
    int start = 11, range, num, temp, count, result, digit;

    printf("Enter range for the armstrong number: ");
    scanf("%d", &range);

    for (num = start; num <= range; num++) {
        temp = num;
        count = 0;
        result = 0;

        while (temp > 0) {
            count++;
            temp /= 10;
        }

        temp = num;

        while (temp > 0) {
            digit = temp % 10;
            int power = 1;

            for (int j = 1; j <= count; j++)
                power *= digit;

            // int x =count;
```

```c
        // while (x>0)
        // {
        //    power *= digit;
        //    x--;
        // }

        result += power;
        temp /= 10;
    }


    if (num == result) {
        printf("%d ", num);
    }
  }


}
int main(){
    Arm();
}
```

// Print prime number in the given range 1 to n?

```c
#include<stdio.h>

int prime(){
    int range , isprime;

    printf("Enter range for the prime number: ");
    scanf("%d", &range);

    for(int num =2;num<=range;num++){
```

```c
        isprime=1;
     for(int i=2;i<num;i++){
       if(num%i==0){
         isprime=0;
         break;
        }
      }
       if(isprime)
       printf(" %d ", num);


     }
}


int main(){
   prime();
}
```

// check perfect number in the given range 1 to n?

```c
#include<stdio.h>

int perfect(){
   int range , fact=0, num;

   printf("Enter range for the perfect number: ");
   scanf("%d", &range);

   for( num = 1;num<=range;num++){
     fact=0;
      for(int i=1;i<=num/2;i++){
       if(num%i==0){
```

```c
            fact +=i;
        }}
        if(fact == num)
        printf("%d ",num);
    }
}


int main(){
    perfect();
}
```

// check strong number in the given range 1 to n?

```c
#include<stdio.h>

int Strong(){
    int range, fact, num, temp, digit, sum;

    printf("Enter range for the strong number: ");
    scanf("%d", &range);

    for(num = 1; num <= range; num++){
        sum = 0;
        temp = num;

        while(temp > 0){
            digit = temp % 10;
            fact = 1;

            for(int i = 1; i <= digit; i++){
                fact *= i;
```

```c
        }
            sum += fact;
            temp /= 10;
        }
        if(sum == num)
            printf("%d ", num);
    }


}


int main(){
    Strong();
}
```

// *Print fibonacci series?(optional)*

```c
#include<stdio.h>

int Fibbo(){
    int n=10 , num , prev=0,next=1,temp;
    for(num=0;num<=n;num++){
        printf("%d ", prev);
        temp = prev + next;
        prev = next;
        next = temp;
    }
}

int main(){
    Fibbo();
}
```

Type2-Ass1

// Finding F from C (temp).

```c
#include<stdio.h>
int Temp(){
    int celcius, farahnite;

    printf("Enter a temp :");
    scanf("%d", &celcius);

    farahnite = (celcius*9/5)+32;

    // printf("Given temp in farhanite is %f",farahnite);
    return farahnite;
}

int main(){
    printf("Given temp in farhanite is %d",Temp());
}
```

// Finding area and perimeter of rectangle or circle.

```c
#include <stdio.h>

float radius;

void rad() {
    printf("Enter the radius: ");
    scanf("%f", &radius);
}
```

```c
float Area() {
    return 3.14 * radius * radius;
}


float Perimeter() {
    return 2 * 3.14 * radius;
}


int main() {
    rad();
    printf("Area of circle: %.2f\n", Area());
    printf("Perimeter of circle: %.2f\n", Perimeter());
    return 0;
}
```

// Accept a 3 digit number from user and find the sum of the digits and also reverse the number

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


int num;


void getNumber() {
    printf("Enter a 3-digit number: ");
    scanf("%d", &num);


    if (num < 100 || num > 999) {
        printf("Invalid input, Enter only 3 digits numbers.\n");
        exit(1);
    }
```

```c
}

int sumOfDigits() {
    int sum = 0, temp = num;
    while (temp > 0) {
        sum += temp % 10;
        temp /= 10;
    }
    return sum;
}

int reverseNumber() {
    int rev = 0, temp = num;
    while (temp > 0) {
        rev = rev * 10 + temp % 10;
        temp /= 10;
    }
    return rev;
}

int main() {
    getNumber();
    printf("Sum of digits: %d\n", sumOfDigits());
    printf("Reverse of the number: %d\n", reverseNumber());
    return 0;
}


// Check if the given number is even or odd.


#include<stdio.h>
```

```c
int  EVENODD(){
    int num;

    printf("Enter a number :");
    scanf("%d", &num);

    return num%2==0;
}


int main(){
    EVENODD()?printf("Even"):printf("Odd");
}
```

```c
// Calculating total salary based on basic. If basic <=5000 da, ta and hra will be
// 10%,20% and 25% respectively otherwise da, ta and hra will be 15%,25% and
// 30% respectively.

#include<stdio.h>

int Salary(){
    int salary,DA,TA,HRA,total=0;

    printf("Enter a basics salary :");
    scanf("%d", &salary);

    if (salary <= 5000)
    {
        DA = salary*0.1;
        TA = salary*0.2;
        HRA = salary*0.25;
```

```c
        total = salary+DA+TA+HRA;
        return total;
    }else{
        DA = salary*0.15;
        TA = salary*0.25;
        HRA = salary*0.30;

        total = salary+DA+TA+HRA;
        return total;
    }

}

void main(){
    printf("Total Salary :%d",Salary());
}
```

```c
// Write a program to check if person is eligible to marry or not (male age >=21
//    and female age>=18).

#include<stdio.h>

int Marry(){
    int fage, mage;

    printf("Enter female age :");
    scanf("%d", &fage);

    printf("Enter male age :");
    scanf("%d", &mage);
```

```c
    if(mage >=21 && fage >=18)
    // printf("Both eligible");
    return 1;
    else if(mage <=21 && fage<=18)
    // printf("Both r not eligible");
    return 0;
    else if (mage<=21 || fage>=18)
    // printf("male not eligible , female eligble");
    return 0;
     else if(mage >=21 || fage<=18)
    // printf("female not eligible , male eligble");
    return 0;
}

void main(){
    Marry()?printf("Eligible"):printf("Not Eligible");
}
```

Type2-Ass2

// 1. Find the price of item when discount is given (specify different discount based on
// price)

#include <stdio.h>

```c
float Discount() {
    float price, dis, finalprice;

    printf("Enter the price of the item: ");
    scanf("%f", &price);

    if (price < 500) {
        dis = price * 0.1;
    } else if (price < 1000) {
        dis = price * 0.2;
    } else if (price < 2000) {
        dis = price * 0.3;
    } else {
        dis = price * 0.4;
    }

    finalprice = price - dis;
    return finalprice;
}

int main() {
    printf("Final Price: %.2f\n", Discount());
    return 0;
}
```

// Write a program to find greatest of three numbers using nested if-else.

```c
#include<stdio.h>

int Comparison(){
    int a = 5, b = 6, c = 9;

    (a>b)?(a>c)?a:c :(b>c)?b:c;

//    if(a > b){
//      if(a > c){
//         return a;
//      } else {
//         return c;
//      }
//    } else if(b > c){
//      return b;
//    } else {
//      return c;
//    }
}

void main(){
    int greatest = Comparison();
    printf("Greatest number is: %d\n", greatest);
}

// Accept two numbers from user and an operator (+,-,/,*,%) based on that
// perform the desired operations.

#include <stdio.h>

int Opration() {
```

```c
    int a = 10;
    int b = 5;
    int res;
    char op = '+';

    if (op == '*') {
        res = a * b;
    } else if (op == '/') {
        res = a / b;
    } else if (op == '+') {
        res = a + b;
    } else if (op == '-') {
        res = a - b;
    } else if (op == '%') {
        res = a % b;
    } else {
        printf("Error\n");
    }
    return res;
}

int main(){
    printf("Result is : %d\n", Opration());
}



// Display a menu to the user (like 1.Even Odd 2. Basic salary etc), ask the user to
// enter his choice, then based on that perform the desired operations.

#include <stdio.h>

int checkEvenOdd() {
```

```c
    int num;
    printf("Enter a number: ");
    scanf("%d", &num);
    return (num % 2 == 0) ? 1 : 0;
}

int getSalary() {
    int salary;
    printf("Enter your basic salary: ");
    scanf("%d", &salary);
    return salary;
}

int main() {
    int choice;

    printf("Menu:\n1. Even/Odd\n2. Basic Salary\n");
    printf("Enter your choice: ");
    scanf("%d", &choice);

    if (choice == 1) {
        if (checkEvenOdd()) {
            printf("The number is Even.\n");
        } else {
            printf("The number is Odd.\n");
        }
    } else if (choice == 2) {
        printf("Your basic salary is: %d\n", getSalary());
    } else {
        printf("Error: Invalid choice\n");
    }
```

```c
        return 0;
}




// Accept the price from user. Ask the user if he is a student (user may say yes or
// no). If he is a student and he has purchased more than 500 than discount is 20%
// otherwise discount is 10%. But if he is not a student then if he has purchased
// more than 600 discount is 15% otherwise there is not discount.

#include <stdio.h>

float offer() {
    float price, discount=0;
    char Student;

    printf("Enter the price: ");
    scanf("%f", &price);

    printf("Are you a student? (y/n): ");
    scanf(" %c", &Student);

    if (Student == 'y' || Student == 'Y') {
        if (price > 500) {
            discount = price * 0.2;
        } else {
            discount = price * 0.1;
        }
    } else if (Student == 'n' || Student == 'N') {
        if (price > 600) {
            discount = price * 0.15;
        }
    } else {
```

```c
        printf("Invalid");
    }

    float finalPrice = price - discount;
    return finalPrice;

}

int main(){
    printf("Final price : %f\n", offer());
}
```

Type2-Ass3

```c
// Calculate sum of numbers in the given range.

#include<stdio.h>

int Sum(){
    int start , end ,sum=0;

    printf("Enter the staring number :");
    scanf("%d" ,  &start);

    printf("Enter the ending number :");
    scanf("%d" ,  &end);

    if(start>end){
        return 1;
    }

    // while (start <= end)
    // {
    //    sum+=start;
    //    start++;
    // }

    for(int i=start;i<=end;i++){
        sum +=i;
    }
    return sum;

}
```

```c
int main(){
    printf("Total sum is : %d", Sum());
}
```

// Check number is prime or not.
```c
#include <stdio.h>

int isPrime(int num) {
    if (num <= 1) return 0;

    for (int i = 2; i <= num / 2; i++) {
        if (num % i == 0) {
            return 0;
        }
    }
    return 1;
}

int main() {
    int num;
    printf("Enter a number to check if it's prime: ");
    scanf("%d", &num);

    if (isPrime(num))
        printf("Prime\n");
    else
        printf("Not Prime\n");

    return 0;
}
```

// Check number is armstrong or not?

```c
#include<stdio.h>

int Armstrong() {
    int num, originalNum, sum = 0, digit, count = 0, temp;

    printf("Enter a number: ");
    scanf("%d", &num);

    originalNum = num;
    temp = num;

    while (temp > 0) {
        temp /= 10;
        count++;
    }

    temp = num;

    while (temp > 0) {
        digit = temp % 10;
        int power = 1;
        for (int i = 0; i < count; i++) {
            power *= digit;
        }
        sum += power;
        temp /= 10;
    }

    return (sum == originalNum);
}
```

```c
int main() {

    Armstrong()?printf("Armstrong"):printf("Not Armstrong");
    // if (Armstrong())
    //    printf("Armstrong number.\n");
    // else
    //    printf("Not an Armstrong number.\n");

    return 0;
}

// Check number is perfect or not.

#include<stdio.h>

int Perfect(){
    int num , fact=0;

    printf("Enter a number :");
    scanf("%d",&num);

    for(int i=1;i<num;i++){
        if(num%i==0){
            fact +=i;
        }
    }

    return (num==fact);
}

int main(){
    Perfect()?printf("Perfect"):printf("Not");
```

```
}
```

// *Find factorial of number.*

```c
#include<stdio.h>

int Fact(){
    int num , fact=1;

    printf("Enter a number :");
    scanf("%d",&num);

    for(int i=1; i<=num;i++){
        fact*=i;
    }
    return fact;

}

int main(){
    printf("Factorial is  : %d",Fact());
}
```

// *Check number is strong or not.*

```c
#include <stdio.h>

int Strong() {
    int num, originalNum, digit, sum = 0;

    printf("Enter a number: ");
    scanf("%d", &num);

    originalNum=num;
```

```c
    while (num > 0) {
        digit = num % 10;
        int fact = 1;

        for (int i = 1; i <= digit; i++) {
            fact *= i;
        }

        sum += fact;
        num /= 10;
    }

    return (sum == originalNum);
}

int main(){
    Strong()?printf("Strong"):printf("Not");
}

// Check the given number is palindrome or not?

#include <stdio.h>

int palindrome() {
    int num, originalNum, reversedNum = 0, digit;

    printf("Enter a number: ");
    scanf("%d", &num);

    originalNum = num;
```

```c
    while (num>0) {
        digit = num % 10;
        reversedNum = reversedNum * 10 + digit;
        num /= 10;
    }


    return(originalNum == reversedNum);
}


int main(){
    palindrome()?printf("Pallindrome"):printf("Not");
}
```

// Add the (first and last) digit of a given number?

```c
#include <stdio.h>

int Summ() {
    int num, firstDigit, lastDigit;
    printf("Enter a number: ");
    scanf("%d", &num);
    lastDigit = num % 10;
    firstDigit = num;
    while (firstDigit >= 10) {
        firstDigit /= 10;
    }
 return firstDigit + lastDigit;
}
int main(){
    printf("Sum of first and last digit: %d\n",Summ());


}
```

Type2-Ass4

// Print armstrong number in the the given range 1 to n?

#include <stdio.h>

```c
int Arm() {
    int start = 11, range, num, temp, count, result, digit;

    printf("Enter range for the armstrong number: ");
    scanf("%d", &range);

    for (num = start; num <= range; num++) {
        temp = num;
        count = 0;
        result = 0;

        while (temp > 0) {
            count++;
            temp /= 10;
        }

        temp = num;

        while (temp > 0) {
            digit = temp % 10;
            int power = 1;

            for (int j = 1; j <= count; j++)
                power *= digit;

            // int x =count;
```

```c
        // while (x>0)
        // {
        //    power *= digit;
        //    x--;
        // }

        result += power;
        temp /= 10;
    }

    if (num == result) {
        printf("%d ", num);
    }
}

}
int main(){
    Arm();
}
// Print prime number in the given range 1 to n?

#include<stdio.h>

int prime(){
    int range , isprime;

    printf("Enter range for the prime number: ");
    scanf("%d", &range);

    for(int num =2;num<=range;num++){
        isprime=1;
    for(int i=2;i<num;i++){
```

```c
      if(num%i==0){
        isprime=0;
        break;
      }
    }
      if(isprime)
      printf(" %d ", num);


    }
}


int main(){
    prime();
}
```

// check perfect number in the given range 1 to n?

```c
#include<stdio.h>

int perfect(){
    int range , fact, num;

    printf("Enter range for the perfect number: ");
    scanf("%d", &range);

    for( num = 1;num<=range;num++){
      fact=0;
       for(int i=1;i<=num/2;i++){
       if(num%i==0){
         fact +=i;
       }}
        if(fact == num)
        printf("%d ",num);
```

```c
    }
}

int main(){
    perfect();
}
// check strong number in the given range 1 to n?

#include<stdio.h>

int Strong(){
    int range, fact, num, temp, digit, sum;

    printf("Enter range for the strong number: ");
    scanf("%d", &range);

    for(num = 1; num <= range; num++){
        sum = 0;
        temp = num;

        while(temp > 0){
            digit = temp % 10;
            fact = 1;

            for(int i = 1; i <= digit; i++){
                fact *= i;
            }
            sum += fact;
            temp /= 10;
        }
        if(sum == num)
            printf("%d ", num);
```

```c
    }

}

int main(){
    Strong();
}
// Print fibonacci series?(optional)

#include<stdio.h>

int Fibbo(){
    int n=10 , num , prev=0,next=1,temp;

    // printf("Enter n for the fibo series: ");
    // scanf("%d", &n);

    for(num=0;num<=n;num++){
        printf("%d ", prev);
        temp = prev + next;
        prev = next;
        next = temp;
    }
}

int main(){
    Fibbo();
}
```

Type3-Ass1

// Finding F from C (temp).

```c
#include<stdio.h>

float temp(float celcius){

    float  farahnite;

    farahnite = (celcius*9/5)+32;

    printf("Given temp in farhanite is %f",farahnite);
}
int main(){

    float celcius;

    printf("Enter a temp :");
    scanf("%f", &celcius);

    temp(celcius);
}
```

// Finding area and perimeter of rectangle or circle.

```c
#include<stdio.h>
void Circle(int radius){

    int perimeter,area;

    area = 3.14*radius*radius;
    printf("area of circle is  : %d \n",area);

    perimeter = 3.14*2*radius;
```

```c
        printf("perimeter of circle is : %d",perimeter);


}


int main(){
    int radius ;


    printf("Enter a radius :");
    scanf("%d", &radius);


    Circle(radius);
}
```

// Accept a 3 digit number from user and find the sum of the digits and also reverse the number

```c
#include <stdio.h>


void Digit(int num) {
    int  sum = 0, rev = 0, temp;


    if (num >= 100 && num <= 999) {
        temp = num;
        while (temp > 0) {
            sum += temp % 10;
            rev = rev * 10 + temp % 10;
            temp /= 10;
        }


        printf("Sum of digits: %d\n", sum);
        printf("Reverse of the number: %d\n", rev);
    } else {
        printf("Enter a valid 3-digit number.\n");
```

```c
        }

    }
    int main(){
        int num;

        printf("Enter a 3-digit number: ");
        scanf("%d", &num);

        Digit(num);
    }
    // Check if the given number is even or odd.

    #include<stdio.h>

    void EVENODD(int num){


        if (num%2==0)
        printf("Even");
        else
        printf("Odd");
    }

    void main(){
        int num;

        printf("Enter a number :");
        scanf("%d", &num);
        EVENODD(num);
    }
```

// Calculating total salary based on basic. If basic <=5000 da, ta and hra will be
// 10%,20% and 25% respectively otherwise da, ta and hra will be 15%,25% and
// 30% respectively.

```c
#include<stdio.h>

void Salary(int salary){
    int DA,TA,HRA,total=0;

    if (salary <= 5000)
    {
        DA = salary*0.1;
        TA = salary*0.2;
        HRA = salary*0.25;

        total = salary+DA+TA+HRA;
        printf("Total Salary : %d",total);
    }else{
        DA = salary*0.15;
        TA = salary*0.25;
        HRA = salary*0.30;

        total = salary+DA+TA+HRA;
        printf("Total Salary : %d",total);
    }

}

void main(){
    int salary;

    printf("Enter a basics salary :");
```

```c
    scanf("%d", &salary);
    Salary(salary);
}
// Write a program to check if person is eligible to marry or not (male age >=21
//    and female age>=18).

#include<stdio.h>

void Marry(int fage,int mage){

   if(mage >=21 && fage >=18)
   printf("Both eligible");
   else if(mage <=21 && fage<=18)
   printf("Both r not eligible");
   else if (mage<=21 || fage>=18)
    printf("male not eligible , female eligble");
    else if(mage >=21 || fage<=18)
    printf("female not eligible , male eligble");
}

void main(){
   int fage, mage;

   printf("Enter female age :");
   scanf("%d", &fage);

   printf("Enter male age :");
   scanf("%d", &mage);

   Marry(fage, mage);
}
```

Type3-Ass2

// 1. Find the price of item when discount is given (specify different discount based on price)

```c
#include <stdio.h>

void Discount(int price) {
    float dis = 0;
    float finalprice;

    if (price < 500) {
        dis = price * 0.1;
    } else if (price < 1000) {
        dis = price * 0.2;
    } else if (price < 2000) {
        dis = price * 0.3;
    } else {
        dis = price * 0.4;
    }

    finalprice = price - dis;

    printf("\nOriginal Price: %d\n", price);
    printf("Discount Applied: %.2f\n", dis);
    printf("Final Price: %.2f\n", finalprice);
}
int main() {
    int price;
    printf("Enter the price of the item: ");
    scanf("%d", &price);
    Discount(price);
    return 0;
}
```

// Write a program to find greatest of three numbers using nested if-else.

```c
#include<stdio.h>

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

    if(a>b){
        if(a>c){
            printf("a is greater than b and  c ");
        }else{
            printf(" C is greater greater than  b ");
        }
    }else if(b>c){
        printf("b is greater c and a ");
    }else{
        printf("c is  greater than a and c");
    }
}

void main(){
    int a , b , c ;

    printf("Enter a 3 numbers as a b c respectively: ");
    scanf("%d %d %d", &a , &b , &c);
    Comparison(a,b,c);
}
```

// Accept two numbers from user and an operator (+,-,/,,%) based on that*
// perform the desired operations.

```c
#include <stdio.h>

int Operation(int a, int b, char op) {
```

```c
    int res = 0;

    if (op == '*') {
        res = a * b;
    } else if (op == '/') {
        if (b == 0) {
            printf("Error\n");
            return 1;
        }
        res = a / b;
    } else if (op == '+') {
        res = a + b;
    } else if (op == '-') {
        res = a - b;
    } else if (op == '%') {
        if (b == 0) {
            printf("Error\n");
            return 1;
        }
        res = a % b;
    } else {
        printf("Error\n");
        return 1;
    }

    printf("Result: %d\n", res);
    return 0;
}

int main() {
    int a, b;
    char op;
```

```c
    printf("Enter two numbers: ");
    scanf("%d %d", &a, &b);

    printf("Enter an operator (+, -, *, /, %%): ");
    scanf(" %c", &op);

    Operation(a, b, op);
    return 0;
}
```

// Display a menu to the user (like 1.Even Odd 2. Basic salary etc), ask the user to
// enter his choice, then based on that perform the desired operations.

```c
#include<stdio.h>

int Salary(int choice){

    if(choice == 1){
    printf("Even /  Odd");
    }else if (choice == 2){
        printf("Basic Salary ");
    }else{
        printf("Error");
    }
}

int main(){
    int choice;

    printf("Menu:\n1.Even/Odd\n2.Basic Salary\n");
    printf("Enter your choice:");
```

```c
    scanf("%d", &choice);
  Salary(choice);
}
// Accept the price from user. Ask the user if he is a student (user may say yes or
// no). If he is a student and he has purchased more than 500 than discount is 20%
// otherwise discount is 10%. But if he is not a student then if he has purchased
// more than 600 discount is 15% otherwise there is not discount.

#include <stdio.h>

int offer(int price ,char Student) {
    int  discount;

    if (Student == 'y' || Student == 'Y') {
       if (price > 500) {
          discount = price * 0.2;
       } else {
          discount = price * 0.1;
       }
    } else if (Student == 'n' || Student == 'N') {
       if (price > 600) {
          discount = price * 0.15;
       }
    } else {
       printf("Invalid");
    }

    int finalPrice = price - discount;
    printf("Final price : %d\n", finalPrice);

}
```

```c
int main(){
    int price;
    char Student;

    printf("Enter the price: ");
    scanf("%d", &price);

    printf("Are you a student? (y/n): ");
    scanf(" %c", &Student);
    offer(price , Student);
}
```

Type3-Ass3

```c
// Print numbes from 1 to 10.
#include<stdio.h>

int Num(int range){
// int a=1;
// while (a<=10)
// {
//   printf("%d\n", a);
//   a++;
// }

for(int i=1;i<=range;i++){
  printf("%d ", i);
}


}

int main(){
    int range;

    printf("Enter a range u want to print from 1 to onmword :");
    scanf("%d",&range);
    Num(range);
}
// Print table for the given number.

#include<stdio.h>

int Table(int a) {
    // int i=1;
```

```c
    for(int i=1;i<=10;i++){
        int res = a*i;
        printf("%d\n",res);
    }

    // while (i <= 10) {
    //    printf(" %d\n", a * i);
    //    i++;
    // }

}
int main(){
    int a;

    printf("Enter a number: ");
    scanf("%d", &a);

    Table(a);
}
// Calculate sum of numbers in the given range.

#include<stdio.h>

int Sum(int start , int end){
    int sum=0;

    if(start>end){
        return 1;
    }

    // while (start <= end)
```

```c
    // {
    //    sum+=start;
    //    start++;
    // }

    for(int i=start;i<=end;i++){
        sum +=i;
    }
    printf("Total sum is : %d", sum);

}

int main(){
    int start , end ;

    printf("Enter the staring number :");
    scanf("%d" ,  &start);

    printf("Enter the ending number :");
    scanf("%d" ,  &end);

    Sum(start,end);
}
// Check number is prime or not.
#include<stdio.h>

int Prime(int num) {
    int  isprime = 1;

    if (num <= 1) {
```

```c
        printf("Not prime");
    }


    for(int i=2;i<=num/2;i++){
        if (num % i == 0) {
            isprime = 0;
            break;
        }
    }


    // while (i <= num / 2) {
    //     if (num % i == 0) {
    //         isprime = 0;
    //         break;
    //     }
    //     i++;
    // }


    isprime?printf("Prime"):printf("Not prime");
    // if (isprime) {
    //     printf("Prime");
    // } else {
    //     printf("Not prime");
    // }



}

int main(){
    int num;


    printf("Enter the number to check prime or not: ");
```

```c
    scanf("%d", &num);

    Prime(num);
}
```

// Check number is armstrong or not?

```c
#include<stdio.h>

int Armstrong( int num) {
    int  originalNum, sum = 0, digit, count = 0, temp;

    originalNum = num;
    temp = num;

    //for digit count
    while(temp >0){
        temp /=10;
        count++;
    }

    temp=num;

    while (temp > 0) {
        digit = temp % 10;
        int power = 1;
        for (int i = 0; i < count; i++) {
            power *= digit;
        }

        sum += power;
        temp /= 10;
    }
```

```c
    if (sum == originalNum)
        printf("%d is Armstrong number.\n", num);
    else
        printf("%d is not Armstrong number.\n", num);
}

int main(){
    int num;

    printf("Enter a number :");
    scanf("%d", &num);

    Armstrong(num);
}
```

// Check number is perfect or not.

```c
#include <stdio.h>

void Perfect(int num) {
    int fact = 0;

    for (int i = 1; i < num; i++) {
        if (num % i == 0) {
            fact += i;
        }
    }

    if (num == fact)
        printf("%d is a perfect number\n", num);
    else
        printf("%d is not a perfect number\n", num);
```

```c
}

int main() {
    int num;
    printf("Enter a number: ");
    scanf("%d", &num);
    Perfect(num);
    return 0;
}
```

// Find factorial of number.

```c
#include<stdio.h>

int Fact(int num){
    int  fact=1;

    for(int i=1; i<=num;i++){
        fact*=i;

    }
    printf("Factorial of %d is : %d",num,fact);
}

int main(){
    int num;

    printf("Enter a number :");
    scanf("%d",&num);

    Fact(num);
}
```

```c
// Check number is strong or not.

#include <stdio.h>

int Strong(int num) {
    int originalNum, digit, sum = 0;



    originalNum=num;

    while (num > 0) {
        digit = num % 10;
        int fact = 1;

        for (int i = 1; i <= digit; i++) {
            fact *= i;
        }

        sum += fact;
        num /= 10;
    }

    if (sum == originalNum)
        printf("%d is a Strong Number.\n", originalNum);
    else
        printf("%d is not a Strong Number.\n", originalNum);

}

int main(){
    int num;
```

```c
    printf("Enter a number: ");
    scanf("%d", &num);

    Strong(num);
}

// Check the given number is palindrome or not?

#include <stdio.h>

int palindrome(int num) {
    int  originalNum, reversedNum = 0, digit;

    originalNum = num;

    while (num>0) {
        digit = num % 10;
        reversedNum = reversedNum * 10 + digit;
        num /= 10;
    }

    if (originalNum == reversedNum)
        printf("%d is a Palindrome.\n", originalNum);
    else
        printf("%d is Not a Palindrome.\n", originalNum);

}

int main(){
    int num;
```

```c
    printf("Enter a number: ");
    scanf("%d", &num);

    palindrome(num);
}
```

// Add the (first and last) digit of a given number?

```c
#include <stdio.h>

int Summ(int num) {
    int firstDigit, lastDigit;

    lastDigit = num % 10;
    firstDigit = num;

    while (firstDigit >= 10) {
        firstDigit /= 10;
    }
    int res= firstDigit+ lastDigit;
    printf("Sum of first and last digits is : %d ", res);

}
int main(){
    int num;

    printf("Enter a number: ");
    scanf("%d", &num);

    Summ(num);

}
```

Type3-Ass4

// *Print armstrong number in the the given range 1 to n?*

```c
#include <stdio.h>

int Arm(int range) {
    int start = 1, num, temp, count, result, digit;



    for (num = start; num <= range; num++) {
        temp = num;
        count = 0;
        result = 0;

        while (temp > 0) {
            count++;
            temp /= 10;
        }

        temp = num;

        while (temp > 0) {
            digit = temp % 10;
            int power = 1;

            for (int j = 1; j <= count; j++)
                power *= digit;

            // int x =count;
            // while (x>0)
            // {
```

```c
        //    power *= digit;
        //    x--;
        // }


        result += power;
        temp /= 10;
    }


    if (num == result) {
        printf("%d ", num);
    }
    }


}
int main(){
    int range;


    printf("Enter range for the armstrong number: ");
    scanf("%d", &range);


    Arm(range);
}
// Print prime number in the given range 1 to n?


#include<stdio.h>


int prime(int range){
    int  isprime;


    for(int num =2;num<=range;num++){
        isprime=1;
    for(int i=2;i<num;i++){
```

```c
      if(num%i==0){
        isprime=0;
        break;
       }
      }
       if(isprime)
      printf(" %d ", num);


     }
}


int main(){
  int range;


    printf("Enter range for the prime number: ");
    scanf("%d", &range);


    prime(range);
}
```

// check perfect number in the given range 1 to n?

```c
#include<stdio.h>


int perfect(int range){
    int  fact=0;


    for(int  num = 1;num<=range;num++){
      fact=0;
       for(int i=1;i<=num/2;i++){
        if(num%i==0){
          fact +=i;
```

```c
        }}
         if(fact == num)
         printf("%d ",num);
    }
}


int main(){
  int range ;

  printf("Enter range for the perfect number: ");
  scanf("%d", &range);

    perfect(range);
}
```
// check strong number in the given range 1 to n?

```c
#include<stdio.h>

int Strong(int range){
    int  fact, num, temp, digit, sum;

    for(num = 1; num <= range; num++){
      sum = 0;
      temp = num;

      while(temp > 0){
         digit = temp % 10;
         fact = 1;

         for(int i = 1; i <= digit; i++){
            fact *= i;
         }
```

```c
            sum += fact;
            temp /= 10;
        }
        if(sum == num)
            printf("%d ", num);
    }


}


int main(){
    int range;

    printf("Enter range for the strong number: ");
    scanf("%d", &range);

    Strong(range);
}
// Print fibonacci series?(optional)

#include<stdio.h>

int Fibbo(int n){
    int  num , prev=0,next=1,temp;

    for(num=0;num<=n;num++){
        printf("%d ", prev);
        temp = prev + next;
        prev = next;
        next = temp;
    }
}
```

```c
int main(){
    int n;

    printf("Enter n for the fibo series: ");
    scanf("%d", &n);
    Fibbo(n);
}
```

Type4-Ass1

// Finding F from C (temp).

```c
#include<stdio.h>

float temp(float celcius){
    float  farahnite;

    farahnite = (celcius*9/5)+32;

    // printf("Given temp in farhanite is %f",farahnite);
    return farahnite;
}
int main(){

    float celcius;

    printf("Enter a temp :");
    scanf("%f", &celcius);
    printf("Given temp in farhanite is %f",temp(celcius));


}
```

// Finding area and perimeter of rectangle or circle.

```c
#include<stdio.h>

float Area(int radius) {
    return 3.14 * radius * radius;
}

float Perimeter(int radius) {
```

```c
    return 2 * 3.14 * radius;
}

int main(){
    int radius ;

    printf("Enter a radius :");
    scanf("%d", &radius);

    printf("Area of a circle is : %f\n",Area(radius));
    printf("Perimeter of a circle is : %f",Perimeter(radius));

}
```

// Accept a 3 digit number from user and find the sum of the digits and also reverse the number

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

void validateNumber(int num) {
    if (num < 100 || num > 999) {
        printf("Invalid input. Enter only a 3-digit number.\n");
        exit(1);
    }
}

int sumOfDigits(int num) {
    int sum = 0;
    while (num > 0) {
        sum += num % 10;
        num /= 10;
    }
```

```c
        return sum;
    }

int reverseNumber(int num) {
    int rev = 0;
    while (num > 0) {
        rev = rev * 10 + num % 10;
        num /= 10;
    }
    return rev;
}

int main() {
    int num;

    printf("Enter a 3-digit number: ");
    scanf("%d", &num);

    validateNumber(num);
    printf("Sum of digits: %d\n", sumOfDigits(num));
    printf("Reverse of the number: %d\n", reverseNumber(num));

    return 0;
}

// Check if the given number is even or odd.

#include<stdio.h>

int isEven(int num){
    return num%2==0;
}
```

```c
int main(){
    int num;

    printf("Enter a number :");
    scanf("%d", &num);

    if (isEven(num))
        printf("Even\n");
    else
        printf("Odd\n");
}
```

// Calculating total salary based on basic. If basic <=5000 da, ta and hra will be
// 10%,20% and 25% respectively otherwise da, ta and hra will be 15%,25% and
// 30% respectively.

```c
#include<stdio.h>

int Salary(int salary){
    int DA,TA,HRA,total=0;

    if (salary <= 5000)
    {
        DA = salary*0.1;
        TA = salary*0.2;
        HRA = salary*0.25;

        total = salary+DA+TA+HRA;
        // printf("Total Salary : %d",total);
        return total;
    }else{
        DA = salary*0.15;
```

```c
        TA = salary*0.25;
        HRA = salary*0.30;


        total = salary+DA+TA+HRA;
        // printf("Total Salary : %d",total);
        return total;
    }


}


void main(){
    int salary;


    printf("Enter a basics salary :");
    scanf("%d", &salary);


    printf("Total Salary is : %d ",Salary(salary));


}
// Write a program to check if person is eligible to marry or not (male age >=21
//    and female age>=18).


#include <stdio.h>


int isEligibleToMarry(int fage, int mage) {
    if (mage >= 21 && fage >= 18)
        return 1;
    else
        return 0;
}


int main() {
```

```c
    int fage, mage;

    printf("Enter female age: ");
    scanf("%d", &fage);

    printf("Enter male age: ");
    scanf("%d", &mage);

    if (isEligibleToMarry(fage, mage))
        printf("Both are eligible to marry.\n");
    else
        printf("One or both are not eligible to marry.\n");

    return 0;
}
```

Type4-Ass2

```c
// 1. Find the price of item when discount is given (specify different discount based on  price)

#include <stdio.h>

int Discount(int price) {
    float dis = 0;
    float finalprice;

    if (price < 500) {
        dis = price * 0.1;
    } else if (price < 1000) {
        dis = price * 0.2;
    } else if (price < 2000) {
        dis = price * 0.3;
    } else {
        dis = price * 0.4;
    }

    finalprice = price - dis;

    // printf("\nOriginal Price: %d\n", price);
    // printf("Discount Applied: %.2f\n", dis);
    // printf("Final Price: %.2f\n", finalprice);

    return finalprice;
}

int main() {
    int price;
    printf("Enter the price of the item: ");
    scanf("%d", &price);
```

```c
    printf("Final price after discount is : %d",Discount(price));
    return 0;
}


// Write a program to find greatest of three numbers using nested if-else.


#include<stdio.h>

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

    return (a>b)?(a>c)?a:c :(b>c)?b:c;

    // if(a>b){
    //    if(a>c){
    //        printf("a is greater than b and  c ");
    //    }else{
    //        printf(" C is greater greater than  b ");
    //    }
    // }else if(b>c){
    //    printf("b is greater c and a ");
    // }else{
    //    printf("c is  greater than a and c");
    // }
}

void main(){
    int a , b , c ;
    printf("Enter a 3 numbers as a b c respectively: ");
    scanf("%d %d %d",&a ,&b ,&c);
    printf("%d is grater than other numbers", Comparison(a,b,c));
}
```

```c
// Accept two numbers from user and an operator (+,-,/,*,%) based on that
// perform the desired operations.

#include <stdio.h>

int Operation(int a, int b, char op) {
    int res = 0;

    if (op == '*') {
        res = a * b;
    } else if (op == '/') {
        if (b == 0) {
            printf("Error\n");
            return 1;
        }
        res = a / b;
    } else if (op == '+') {
        res = a + b;
    } else if (op == '-') {
        res = a - b;
    } else if (op == '%') {
        if (b == 0) {
            printf("Error\n");
            return 1;
        }
        res = a % b;
    } else {
        printf("Error\n");
        return 1;
    }

    // printf("Result: %d\n", res);
```

```c
    return res;
}

int main() {
    int a, b;
    char op;

    printf("Enter two numbers: ");
    scanf("%d %d", &a, &b);

    printf("Enter an operator (+, -, *, /, %%): ");
    scanf(" %c", &op);

    printf("Result : %d ",Operation(a, b, op));

    return 0;
}
```

// Display a menu to the user (like 1.Even Odd 2. Basic salary etc), ask the user to
// enter his choice, then based on that perform the desired operations.

```c
#include <stdio.h>

int checkEvenOdd(int num) {
    return (num % 2 == 0) ? 1 : 0;
}

int getSalary(int salary) {
    return salary;
}

int main() {
```

```c
    int choice, num, salary;

    printf("Menu:\n1. Even/Odd\n2. Basic Salary\n");
    printf("Enter your choice: ");
    scanf("%d", &choice);

    if (choice == 1) {
        printf("Enter a number: ");
        scanf("%d", &num);

        if (checkEvenOdd(num)) {
            printf("Even.\n");
        } else {
            printf("Odd.\n");
        }
    } else if (choice == 2) {
        printf("Enter your basic salary: ");
        scanf("%d", &salary);
        printf("Your basic salary is: %d\n", getSalary(salary));
    } else {
        printf("Error: Invalid choice\n");
    }

    return 0;
}


// Accept the price from user. Ask the user if he is a student (user may say yes or
// no). If he is a student and he has purchased more than 500 than discount is 20%
// otherwise discount is 10%. But if he is not a student then if he has purchased
// more than 600 discount is 15% otherwise there is not discount.


#include <stdio.h>
```

```c
int offer(int price ,char Student) {
    int  discount;

    if (Student == 'y' || Student == 'Y') {
        if (price > 500) {
            discount = price * 0.2;
        } else {
            discount = price * 0.1;
        }
    } else if (Student == 'n' || Student == 'N') {
        if (price > 600) {
            discount = price * 0.15;
        }
    } else {
        printf("Invalid");
    }

    int finalPrice = price - discount;
    return finalPrice;
}
int main(){
    int price;
    char Student;
    printf("Enter the price: ");
    scanf("%d", &price);

    printf("Are you a student? (y/n): ");
    scanf(" %c", &Student);

    printf("Final price : %d\n", offer(price , Student));
}
```

Type4-Ass3

// Print numbes from 1 to 10.

#include<stdio.h>

```c
int Num(int range){
// int a=1;
// while (a<=10)
// {
//   printf("%d\n", a);
//   a++;
// }

for(int i=1;i<=range;i++){
  printf("%d ", i);
}


}

int main(){
    int range;

    printf("Enter a range u want to print from 1 to onmword :");
    scanf("%d",&range);
    Num(range);
}
```

// Print table for the given number.

#include<stdio.h>

```c
int Table(int a) {
    // int i=1;
```

```c
    for(int i=1;i<=10;i++){
        int res = a*i;
        printf("%d\n",res);
    }


    // while (i <= 10) {
    //    printf(" %d\n", a * i);
    //    i++;
    // }


}
int main(){
    int a;


    printf("Enter a number: ");
    scanf("%d", &a);


    Table(a);
}
// Calculate sum of numbers in the given range.


#include<stdio.h>


int Sum(int start , int end){
    int sum=0;


    if(start>end){
        return 1;
    }


    // while (start <= end)
    // {
```

```c
//    sum+=start;
//    start++;
// }

    for(int i=start;i<=end;i++){
        sum +=i;
    }
    // printf("Total sum is : %d", sum);
    return sum;

}

int main(){
    int start , end ;

    printf("Enter the staring number :");
    scanf("%d" ,  &start);

    printf("Enter the ending number :");
    scanf("%d" ,  &end);

    printf("Total sum is %d ", Sum(start,end));

}
// Check number is prime or not.
#include<stdio.h>

int Prime(int num) {

    if (num <= 1) {
        return 0;
    }
```

```c
    for(int i=2;i<=num/2;i++){
        if (num % i == 0) {
            return 0;
        }
    }
    return 1;
    // while (i <= num / 2) {
    //    if (num % i == 0) {
    //        isprime = 0;
    //        break;
    //    }
    //    i++;
    // }


    // isprime?printf("Prime"):printf("Not prime");

}

int main(){
    int num;

    printf("Enter the number to check prime or not: ");
    scanf("%d", &num);

    if (Prime(num)) {
        printf("Prime");
    } else {
        printf("Not prime");
    }
    // Prime(num);
}
```

```c
// Check number is armstrong or not?

#include<stdio.h>

int Armstrong( int num) {
    int  sum = 0, digit, count = 0, temp;

    // originalNum = num;
    temp = num;

    //for digit count
    while(temp >0){
        temp /=10;
        count++;
    }

    temp=num;

    while (temp > 0) {
        digit = temp % 10;
        int power = 1;
        for (int i = 0; i < count; i++) {
            power *= digit;
        }

        sum += power;
        temp /= 10;
    }

    return (sum == num);

}
```

```c
int main(){
    int num;

    printf("Enter a number :");
    scanf("%d", &num);

     if(Armstrong(num))
    printf("%d is Armstrong number.\n", num);
    else
        printf("%d is not Armstrong number.\n", num);
}
```

// Check number is perfect or not.

```c
#include <stdio.h>

int Perfect(int num) {
    int fact = 0;

    for (int i = 1; i < num; i++) {
        if (num % i == 0) {
            fact += i;
        }
    }

    return (num == fact);
}

int main() {
    int num;
    printf("Enter a number: ");
    scanf("%d", &num);
```

```c
    if (Perfect(num))
        printf("%d is a perfect number\n", num);
    else
        printf("%d is not a perfect number\n", num);
    return 0;
}
```

// Find factorial of number.

```c
#include<stdio.h>

int Fact(int num){
    int  fact=1;

    for(int i=1; i<=num;i++){
        fact*=i;

    }
    return fact;

}

int main(){
    int num;

    printf("Enter a number :");
    scanf("%d",&num);

    printf("Factorial of %d is : %d",num,Fact(num));
```

```
}
// Check number is strong or not.

#include <stdio.h>

int Strong(int num) {
    int originalNum, digit, sum = 0, temp;

    num=temp;

    while (temp > 0) {
        digit = temp % 10;
        int fact = 1;

        for (int i = 1; i <= digit; i++) {
            fact *= i;
        }

        sum += fact;
        temp /= 10;
    }

    return num == sum;

}

int main(){
    int num;

    printf("Enter a number: ");
    scanf("%d", &num);
```

```c
    if (Strong(num))
        printf("%d is a Strong Number.\n", num);
    else
        printf("%d is not a Strong Number.\n", num);



}
```

// Check the given number is palindrome or not?

```c
#include <stdio.h>

int palindrome(int num) {
    int  originalNum, reversedNum = 0, digit;


    originalNum = num;


    while (num>0) {
        digit = num % 10;
        reversedNum = reversedNum * 10 + digit;
        num /= 10;
    }


    return reversedNum == originalNum;



}

int main(){
    int num;


    printf("Enter a number: ");
```

```c
    scanf("%d", &num);

    if (palindrome(num))
        printf("%d is a Palindrome.\n", num);
    else
        printf("%d is Not a Palindrome.\n", num);


}
```

// Add the (first and last) digit of a given number?

```c
#include <stdio.h>

int Summ(int num) {
    int firstDigit, lastDigit;

    lastDigit = num % 10;
    firstDigit = num;

    while (firstDigit >= 10) {
        firstDigit /= 10;
    }
    int res= firstDigit+ lastDigit;
    // printf("Sum of first and last digits is : %d ", res);
    return res;

}
int main(){
    int num;

    printf("Enter a number: ");
```

```c
    scanf("%d", &num);

    printf("Sum of first and last digits is : %d ", Summ(num));

}
```