PROGRAMMING CODES

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program performing arithmetic expressions using switch case

#include <stdio.h>

int main() {

int a, b, result;

char e;

printf("\nenter a: ");

scanf("%d", &a);

printf("\nenter b: ");

scanf("%d", &b);

printf("\nenter the operator: ");

scanf(" %c", &e);

switch(e) {

case '+':

result = a + b;

printf("Result: %d\n", result);

break;

case '-':

result = a - b;

printf("Result: %d\n", result);

break;

case '\*':

result = a \* b;

printf("Result: %d\n", result);

break;

case '%':

result = a % b;

printf("Result: %d\n", result);

break;

case '/':

result = a / b;

printf("Result: %d\n", result);

break;

}

return 0;

}

Write a Program to find the factorial of a number

#include<stdio.h>

void factorial(int n);

int main ()

{

int n;

factorial(n);

}

void factorial(int n)

{

int fact=1,i;

printf("enyer a number");

scanf("%d",&n);

for(i=1;i<=n;i++)

{

fact=fact\*i;

}

printf("%d",fact);

}

printing 2 table

#include<stdio.h>

int main()

{

int i;

for(i=1;i<=10;i++)

{

printf("\n%d",i\*2);

}

}

Take 10 integers from keyboard using loop and print their average value on the screen.

#include<stdio.h>

int main()

{

int a[10],i,n,sum=0;

printf("enter num of array elements");

scanf("%d",&n);

printf("enter array elements\n");

for(i=0;i<n;i++)

scanf("%d",&a[i]);

for(i=0;i<n;i++)

{

sum+=a[i];

}

printf("%d",sum);

}

Income tax calculation:

def fun1(income):

  if income<=250000:

    print("NO TAX")

  elif income>=250000 and income<=500000:

    tax=0.05\*income

    return tax

  elif income>=500001 and income<=1000000:

    tax=0.10\*income

    return tax

  elif income>=1000001 and income<=3000000:

    tax=0.20\*income

    return tax

  elif income>=3000000:

    tax=0.33\*3000000

    return tax

def fun(income):

  if income<=300000:

    print("NO TAX")

  elif income>=300001 and income<=500000:

    tax=0.05\*income

    return tax

  elif income>=500001 and income<=2000000:

    tax=0.10\*income

    return tax

  elif income>=2000000:

    tax=0.20\*income

    return tax

age=int(input("enter the age"))

income=int(input("enter the income"))

if age<60:

  incometax=fun1(income)

  print(incometax)

elif age>=60:

  incometax=fun(income)

  print(incometax)

**3.Rotated Number Pyramid**

*import java*.*io*.*\**;

*public* *class* RotatedNumberPym {

*public* *static* void *main*(String[] args)

{

int n = 4;

*for* (int i = 1; i <= n; i++)

{

*for* (int j = n - 1; j >= i; j--) {

System.*out*.*print*(" ");

}

*for* (int k = 0; k < i; k++) {

System.*out*.*print*((i + k) + " ");

}

System.*out*.*println*();

}

}

}

**4.Palindrome Triangle**

*import java*.*io*.*\**;

*public* *class* Palindrometri

{

*public* *static* void *main*(String[] args) {

int n=5;

*for*(int i=1;i<=n;i++)

{

*for*(int j=1;j<=n-i;j++)

{

System.*out*.*print*(" ");

}

*for*(int j=i;j>=1;j--)

{

System.*out*.*print*(j);

}

*for*(int j=2;j<=i;j++)

{

System.*out*.*print*(j);

}

System.*out*.*println*();

}

}

}

5.Number Pyramid

*import java*.*io*.*\**;

*public* *class* Numberpym {

*public* *static* void *main*(String[] args) {

*for*(int i=1;i<=4;i++)

{

*for*(int j=1;j<=i;j++)

{

System.*out*.*print*(" "+i);

}

System.*out*.*println*(" ");

}

}

}

6.Continuous Number Pyramid

*import java*.*io*.*\**;

*public* *class* ContinousnumPym {

*public* *static* void *main*(String[] args) {

int c=0;

*for*(int i=1;i<=4;i++)

{

*for*(int j=1;j<=i;j++)

{

c+=1;

System.*out*.*print*(" "+c);

}

System.*out*.*println*(" ");

}

}

}

7.Right Half Pyramid

*Import* [*java.io*](http://java.io/)*.\*;*

*public* *class* Righthalfpym

{

*public* *static* void *main*(String[] args) {

*for*(int i=1;i<=5;i++)

{

*for*(int j=1;j<=i;j++)

{

System.*out*.*print*("\*");

}

System.*out*.*println*(" ");

}

}

}

8.Left Half Pyramid

import *java*.*io*.*\**;

*public* *class* Lefthalfpym

{

*public* *static* void *main*(String[] args) {

*for*(int i=1;i<=5;i++)

{

*for*(int j=4;j>=i;j--)

{

System.*out*.*print*(" ");

}

*for*(int k=1;k<=i;k++)

{

System.*out*.*print*("\*");

}

System.*out*.*println*(" ");

}

}

}

9.Full Pyramid

import *java*.*io*.*\**;

*public* *class* Fullpym

{

*public* *static* void *main*(String[] args) {

*for*(int i=1;i<=5;i++)

{

*for*(int j=4;j>=i;j--)

{

System.*out*.*print*(" ");

}

*for*(int k=1;k<=i;k++)

{

System.*out*.*print*(" \*");

}

System.*out*.*println*(" ");

}

}

}

10.Inverted Right Half Pyramid

import *java*.*io*.*\**;

*public* *class* Invertedrhpym

{

*public* *static* void *main*(String[] args) {

*for* (int i = 1; i <= 5; i++)

{

*for* (int j = 1; j <= 5 - i + 1; j++)

{

System.*out*.*print*("\*");

}

System.*out*.*println*();

}

}

}

11..Inverted Left Half Pyramid

import *java*.*io*.*\**;

*public* *class* Invertedlhpym{

*public* *static* void *main*(String[] args) {

int n = 5;

*for* (int i = 0; i < n; i++)

{

*for* (int j = 0; j < i; j++)

{

System.*out*.*print*(" ");

}

*for* (int k = 0; k < n - i; k++)

{

System.*out*.*print*("\*");

}

System.*out*.*println*();

}

}

}

12.Inverted Full Pyramid

import *java*.*io*.*\**;

*public* *class* Invertedfullpym

{

*public* *static* void *main*(String[] args) {

int n = 5;

*for* (int i = 0; i < n; i++)

{

*for* (int j = 0; j < i; j++)

{

System.*out*.*print*(" ");

}

*for* (int k = 0; k < n - i; k++)

{

System.*out*.*print*(" \*");

}

System.*out*.*println*();

}

}

}

13.Rhombus Pattern

import *java*.*io*.*\**;

*public* *class* Rhombus {

*public* *static* void *main*(String[] args) {

int row = 4;

int col = 4;

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

*for* (int j=1 ; j<=i ; j++)

System.*out*.*print*(" ");

*for* (int j=1 ; j<=col; j++)

System.*out*.*print*("\*");

System.*out*.*println*();

}

}

}

14.Diamond Pattern

import *java*.*io*.*\**;

*public* *class* Diamond {

*public* *static* void *main*(String[] args) {

int n = 5;

int i, j;

*for* (i = 1; i <= n; i++) {

*for* (j = 1; j <= n - i; j++) {

System.*out*.*print*(" ");

}

*for* (j = 1; j <= i \* 2 - 1; j++) {

System.*out*.*print*("\*");

}

System.*out*.*println*();

}

*for* (i = n - 1; i > 0; i--) {

*for* (j = 1; j <= n - i; j++) {

System.*out*.*print*(" ");

}

*for* (j = 1; j <= i \* 2 - 1; j++) {

System.*out*.*print*("\*");

}

System.*out*.*println*();

}

}

}