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| **Code to Print six Trigonometric ratios values**  **21CSS101J – PROGRAMMING FOR PROBLEM SOLVING**  **Mini Project Report**  *Submitted by*  **SANKALP SAHU**  **[RA2211003011373]**  **SRMIST-01.jpg**  **SCHOOL OF COMPUTING**  **COLLEGE OF ENGINEERING AND TECHNOLOGY**  **SRM INSTITUTE OF SCIENCE AND TECHNOLOGY**  **(Under Section 3 of UGC Act, 1956)**  S.R.M. NAGAR, KATTANKULATHUR – 603 203  KANCHEEPURAM DISTRICT  **December 2022** |

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**Problem Statement :**

**Write a** **Code to Print six Trigonometric ratios values at angle equal to**

* **0 Degree.**
* **30 Degree.**
* **45 Degree.**
* **60 Degree.**
* **90 Degree.**

**Methodology Or Procedure –**

By using scanf statement in c we get input from the user to get to know which trigonometric values user want to get and use switch with nested if else statement to print the values of their input ratio and degree.

Code –

// Online C compiler to run C program online

#include <stdio.h>

int main() {

int choice , a;

printf("Press 1 for sin function\n");

printf("Press 2 for cos function\n");

printf("Press 3 for tan function\n");

printf("Press 4 for cosec function\n");

printf("Press 5 for sec function\n");

printf("Press 6 for cot function\n");

printf("Enter your choice : ");

scanf("%d",&choice);

switch(choice)

{

case 1:

printf("Enter angle value (in degrees) : ");

scanf("%d",&a);

if(a==0){

printf("Sin(0 degree) = 0");

}

else if(a==30){

printf("Sin(30 degree) = 0.5");

}

else if(a==45){

printf("Sin(45 degree) = 0.707");

}

else if(a==60){

printf("Sin(60 degree) = 0.866");

}

else if(a==90){

printf("Sin(90 degree) = 1");

}

else

{

printf("Invalid Degree values");

}

break;

case 2:

printf("Enter angle value (in degrees) : ");

scanf("%d",&a);

if(a==0){

printf("Cos(0 degress) = 1");

}

else if(a==30){

printf("Cos(30 degress) = 0.866");

}

else if(a==45){

printf("Cos(45 degress) = 0.707");

}

else if(a==60){

printf("Cos(60 degress) = 0.5");

}

else if(a==90){

printf("Cos(90 degress) = 0");

}

else

{

printf("Invalid Degree values");

}

break;

case 3:

printf("Enter angle value (in degrees) : ");

scanf("%d",&a);

if(a==0){

printf("Tan(0 degress) = 0");

}

else if(a==30){

printf("Tan(30 degress) = 0.577");

}

else if(a==45){

printf("Tan(45 degress) = 1");

}

else if(a==60){

printf("Tan(60 degress) = 1.732");

}

else if(a==90){

printf("Tan(90 degress) = infinity");

}

else

{

printf("Invalid Degree values");

}

break;

case 4:

printf("Enter angle value (in degrees) : ");

scanf("%d",&a);

if(a==0){

printf("Cosec(0 degree) = infinty");

}

else if(a==30){

printf("Cosec(30 degree) = 2");

}

else if(a==45){

printf("Cosec(45 degree) = 1.414");

}

else if(a==60){

printf("Cosec(60 degree) = 1.154");

}

else if(a==90){

printf("Cosec(90 degree) = 1");

}

else

{

printf("Invalid Degree values");

}

break;

case 5:

printf("Enter angle value (in degrees) : ");

scanf("%d",&a);

if(a==0){

printf("Sec(0 degress) = 1");

}

else if(a==30){

printf("Sec(30 degress) = 1.154");

}

else if(a==45){

printf("Sec(45 degress) = 1.414");

}

else if(a==60){

printf("Sec(60 degress) = 2");

}

else if(a==90){

printf("Sec(90 degress) = infinity");

}

else

{

printf("Invalid Degree values");

}

break;

case 6:

printf("Enter angle value (in degrees) : ");

scanf("%d",&a);

if(a==0){

printf("Cot(0 degress) = infinty");

}

else if(a==30){

printf("Cot(30 degress) = 1.733");

}

else if(a==45){

printf("Cot(45 degress) = 1");

}

else if(a==60){

printf("Cot(60 degress) = 0.577");

}

else if(a==90){

printf("Cot(90 degress) = 0");

}

else

{

printf("Invalid Degree values");

}

break;

default:

printf("Invalid choice");

}

return 0;

}