**Homework 4 – Create your own Function**

Create your own function in C that accepts one input number and returns a double number. The themes for the functions should be one of the following:

• Calculates 3.14 times of the square of input number. For example, if 2 is input then 12.56 should be returned. (e.g. 3.14\*2\*2 = 12.56)

• Divides the number by 3 and returns the result. For example, if 6 was input then 2.0 should be returned.

• Squares the number and returns the result. For example, if 12.1 was entered then 146.41 would be returned.

You should provide both your C code and an example call to the C code function. Be sure to provide an overview of what your function is doing. Include header documentation in the code as well as internal code documentation.

Code:

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//CMIS 102 Homework 4

//Create your own Function

//29 July 2020

#include<stdio.h>

double PiSquare(int num)

{

return 3.14\*num\*num;

}

double dividebythree(int num)

{

return num/3.0;

}

double dsquare(double num){

return num\*num;

}

int main(){

int n;

printf("Enter Number to calculate 3.14 times of the square of input number ::");

scanf("%d",&n);

printf("Pi \* square of number =%lf",PiSquare(n));

printf("\n Enter Number to calculate to divide the number by 3 and return the results ::");

scanf("%d",&n);

printf("Divide by three =%lf",dividebythree(n));

double dn;

printf("\n Enter Number to calculate to square the number and to return the results ::");

scanf("%lf",&dn);

printf("Double Square =%f\n",dsquare(dn));

printf("...bye...\n");

}

|  |  |  |
| --- | --- | --- |
| Test Case # | Input | Expected output |
| Test Case 1 | 4  10  5 | 50.240000  3.333333  25.0000000 |
| Test Case 2 | 7  19  2.1 | 153.860000  6.333333  4.410000 |
| Test Case 3 | 0  -1  9 | 0 .000000  -0.333333  81.000000 |

Test Case 1:

A screenshot of a cell phone

Description automatically generated

Test Case 2:

A screenshot of a cell phone

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Test Case 3:

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