

Experiment No. 1

Date:

Aim: Implement the concept of inline function.

**Aim :-** Implement the concept of inline function.

**PART A]** Write a program in C++ to Subtract two numbers and divide two numbers using the concept of Inline Function.

**PART B]** Write a program in C++ to calculate the area of circle and circumference of circle using the concept of inline function.

**Theory :** An inline function is a function whose definition is small and can be substituted at the place where its function call is made. By using the "Inline" keyword before a function's definition, you suggest to the compiler to insert the complete body of the function whenever the function is called thus eliminating the overhead of a function call.

→ **Syntax :**

```
inline return-type function-type(parameters) {  
}
```

**Accessor Functions :** Commonly used for accessor function in classes where the function simply returns a value or sets a member variable.

Code:-

PART A :

```
#include <iostream>
using namespace std;
inline int sub (int x, int y) {
    int c;
    c = x - y;
    return c;
}

inline int divi (int x, int y) {
    int d;
    d = x / y;
    return d;
}

int main () {
    int m, n, o, p;
    cout << "Enter any two numbers : " << endl;
    cin >> m >> n;
    o = sub (m, n);
    cout << "The Substraction is : " << o << endl;
    p = divi (m, n);
    cout << "The division is : " << p << endl;
}
```

Output: Enter any two Numbers :

69 96

The subtraction is : -27

The division is : 0



Code :- PART B :

```
#include <iostream>
```

```
using namespace std;
```

```
inline int area (int x) {
```

```
    int c; float pi = 3.142;
```

```
    c = pi * (x * x);
```

```
    return c;
```

```
}
```

```
inline int circum (int x) {
```

```
    int d; float pi = 3.142;
```

```
    d = 2 * pi * x;
```

```
    return d;
```

```
}
```

```
int main () {
```

```
    int m, o, p;
```

```
    cout << "Enter any Number : " << endl;
```

```
    cin >> m;
```

```
    o = area(m);
```

```
    cout << "The area of circle is : " << o << "sq.fts"
```

```
    << endl;
```

```
    p = circum(m);
```

```
    cout << "The circumference of circle is : " << p <<
```

```
    "sq.fts" << endl; }
```

Output : Enter any Number : 69 96

The Area of Circle is : 14959 sq.fts.

The circumference of Circle is : 433 sq.fts.

Conclusion: Hence the programs on the inline function were executed successfully with correct output.

```

// C program to find the area of circle
#include <stdio.h>
#define PI 3.14159
float area(float r)
{
    return PI * r * r;
}
int main()
{
    float r;
    printf("Enter radius: ");
    scanf("%f", &r);
    printf("Area of circle is: %.2f", area(r));
    return 0;
}

```

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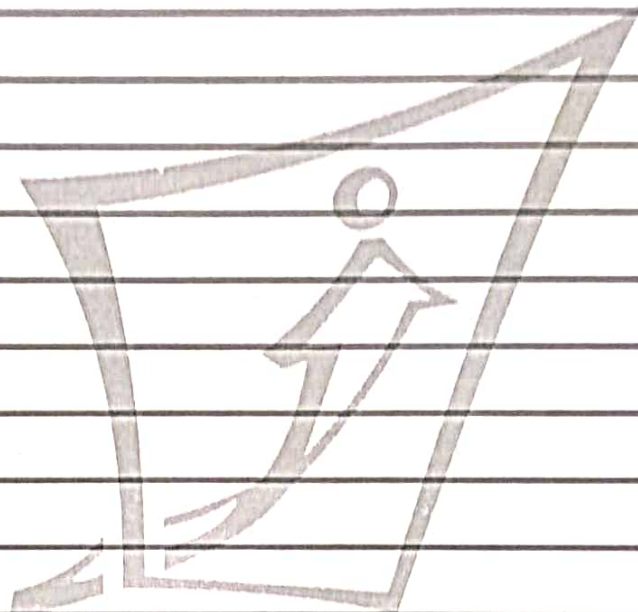
```

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ARISE & SHINE