

Bahria University,

Karachi Campus



Bahria University
Discovering Knowledge

COURSE: CSC -113 Computing Programming lab
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Submitted To:

COMPUTER PROGRAMMING LAB 8

1. Write a program in which you have to calculate the salary of employees by using functions (departments are, IT, Marketing, Accounting, Human Resource)

Basic salary = 50k and bonus = 35%, 30%, 15% and 10% of basic

PROGRAM:

```
#include<iostream>
using namespace std;
int IT();
int Marketing();
int Accounting();
int HumanResource();
int main()
{
    cout<<"BASIC SALARY = 50000"<<endl;
    cout<<"IT SALARY WITH 35% BONUS = "<<IT()<<endl;
    cout<<"MARKETING SALARY WITH 30% BONUS = "<<Marketing()<<endl;
    cout<<"ACCOUNTING SALARY WITH 15% BONUS = "<<Accounting()<<endl;
    cout<<"HUMAN RESOURCE WITH 10% BONUS = "<<HumanResource()<<endl;
}
int IT()
{
    int salary=50000,total;
    total=salary+(salary*.35);
    return total;
}
int Marketing()
{
    int salary=50000,total;
    total=salary+(salary*.30);
    return total;
}
int Accounting()
{
    int salary=50000,total;
    total=salary+(salary*.15);
    return total;
}
int HumanResource()
{
    int salary=50000,total;
    total=salary+(salary*.10);
    return total;
}
```

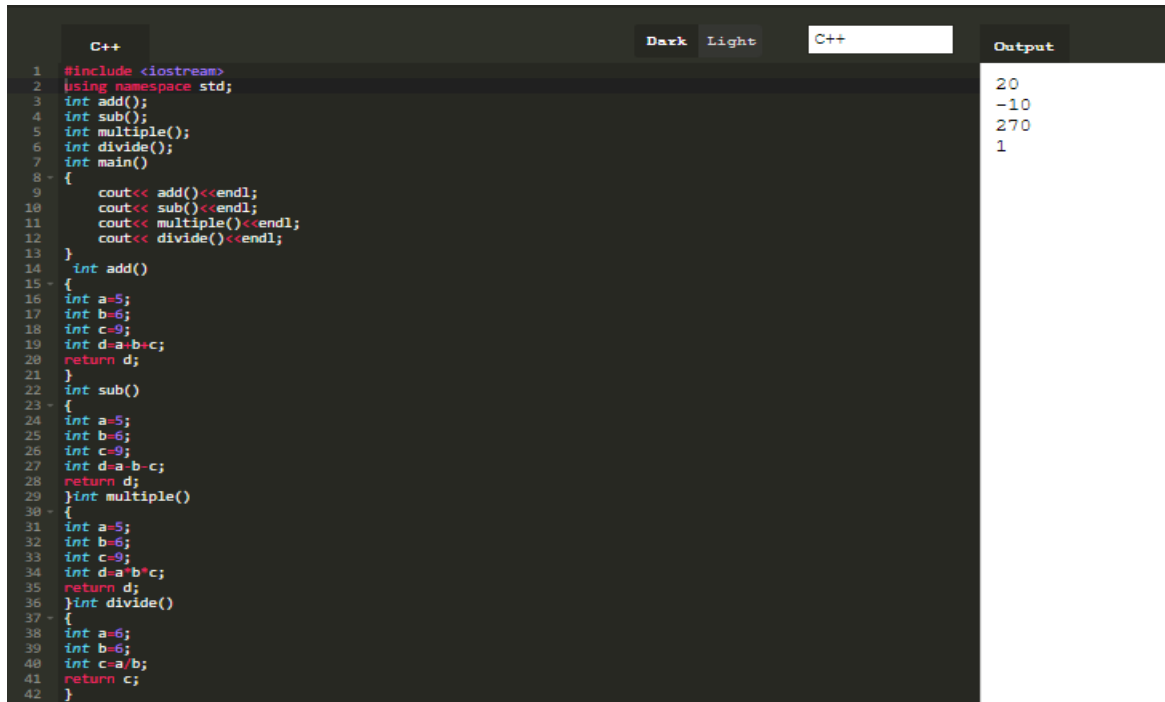
```
BASIC SALARY = 50000
IT SALARY WITH 35% BONUS = 67500
MARKETING SALARY WITH 30% BONUS = 65000
ACCOUNTING SALARY WITH 15% BONUS = 57500
HUMAN RESOURCE WITH 10% BONUS = 55000

...Program finished with exit code 0
Press ENTER to exit console.
```

COMPUTER PROGRAMMING LAB 8

2. Write a C++ Program that contains four user defined function(s) add(), subtract(), multiply(), divide().

PROGRAM:



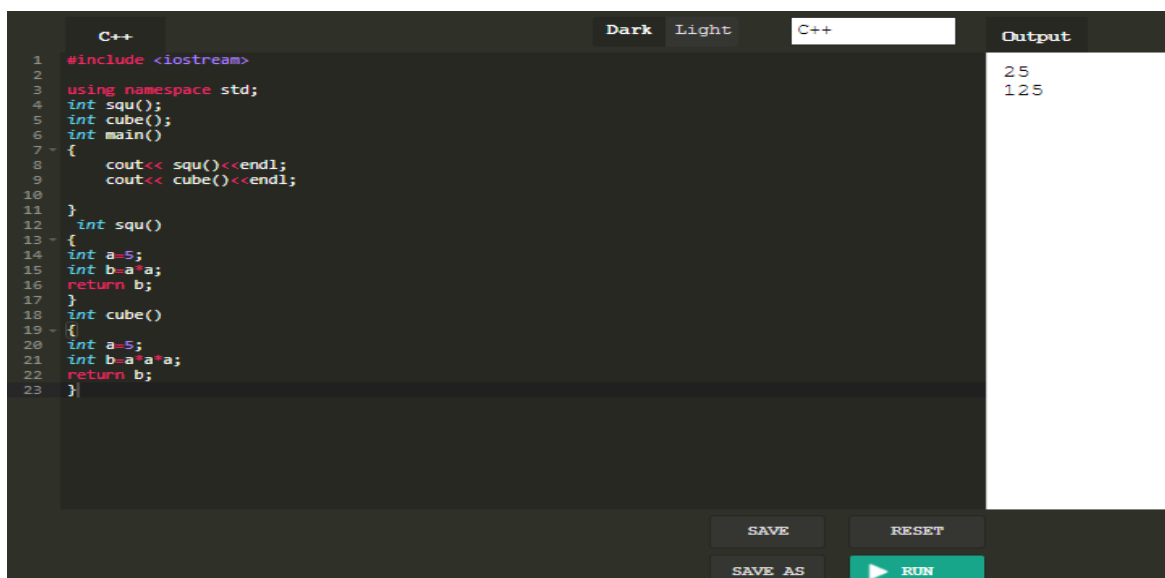
```
1 #include <iostream>
2 using namespace std;
3 int add();
4 int sub();
5 int multiply();
6 int divide();
7 int main()
8 {
9     cout<< add()<<endl;
10    cout<< sub()<<endl;
11    cout<< multiply()<<endl;
12    cout<< divide()<<endl;
13 }
14 int add()
15 {
16     int a=5;
17     int b=6;
18     int c=9;
19     int d=a+b+c;
20     return d;
21 }
22 int sub()
23 {
24     int a=5;
25     int b=6;
26     int c=9;
27     int d=a-b-c;
28     return d;
29 }
30 int multiply()
31 {
32     int a=5;
33     int b=6;
34     int c=9;
35     int d=a*b*c;
36     return d;
37 }
38 int divide()
39 {
40     int a=6;
41     int b=6;
42     int c=a/b;
43     return c;
44 }
```

Output

```
20
-10
270
1
```

3. Write a method named square_cube() that computes the square and cube of the value and display the result.

PROGRAM:



```
1 #include <iostream>
2 using namespace std;
3 int squ();
4 int cube();
5 int main()
6 {
7     cout<< squ()<<endl;
8     cout<< cube()<<endl;
9 }
10 int squ()
11 {
12     int a=5;
13     int b=a*a;
14     return b;
15 }
16 int cube()
17 {
18     int a=5;
19     int b=a*a*a;
20     return b;
21 }
```

Output

```
25
125
```

SAVE RESET SAVE AS RUN

4. Write a C++ program that contain a user defined function primeno().

PROGRAM:

```

9  #include <iostream>
10 using namespace std;
11 bool isPrime(int num);
12 int main()
13 {
14     isPrime(41);
15     isPrime(55);
16     return 0;
17 }
18 bool isPrime(int num)
19 {
20     bool flag=false;
21     for(int i = 2; i <= num / 2; i++)
22     {
23         if(num % i == 0)
24         {
25             flag = true;
26             break;
27         }
28     }
29     if(flag==0)
30         cout<<num<<" Is a Prime Number"<<endl;
31     else
32         cout<<num<<" Is not a Prime Number"<<endl;
33     return flag;
34 }
35

```

input

```

41 Is a Prime Number
55 Is not a Prime Number

...Program finished with exit code 0
Press ENTER to exit console.

```

5. Write a C++ Program that contains one user defined function cal_grades().

In user defined function:

- o Perform conditioning with else if statement return char value.
- o Function must return value.

PROGRAM:

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```
8 #include<iostream>
9 using namespace std;
10 char cal_grade(int n);
11 int main ()
12 {
13     int n;
14     char Grade;
15     cout << "Enter Your Marks = ";
16     cin >> n;
17     cout << endl;
18     Grade = cal_grade(n);
19     cout << "YOUR GRADE IS = " << Grade;
20     return 0;
21 }
22 char cal_grade(int n)
23 {
24     char Grade;
25     if (n>=50 && n<60)
26         Grade = 'D';
27     else if (n>=60 && n<70)
28         Grade = 'C';
29     else if (n>=70 && n<80)
30         Grade = 'B';
31     else if (n>=80 && n<=100)
32         Grade = 'A';
33     else
34         Grade = 'F';
35     return Grade;
36 }
```

input

```
Enter Your Marks = 90

YOUR GRADE IS = A

...Program finished with exit code 0
Press ENTER to exit console.
```

6. Write a program in C to swap two numbers using function.

Test Data:

Input 1st number: 13

Input 2nd number: 15

Expected Output:

Before swapping: n1 = 13, n2 = 15

After swapping: n1 = 15, n2 = 13

PROGRAM:

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```
7  *****/
8
9  #include<iostream>
10 using namespace std;
11 void swap(int ,int );
12 int main()
13 {
14     int a,b;
15     cout<<"Enter Two Number \n";
16     cin>>a>>b;
17     cout<<"Before Swapping = "<<a<<" "<<b;
18     cout<<"\nAfter Swapping = ";
19     swap(a,b);
20     return 0;
21 }
22 void swap(int x,int y)
23 {
24     int z;
25     z=x;
26     x=y;
27     y=z;
28     cout<<x<<" "<<y;
29 }
30
```

input

```
Enter Two Number
5
7
Before Swapping = 5 7
After Swapping = 7 5

...Program finished with exit code 0
Press ENTER to exit console.
```