



PF LAB 02

Tasks



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Problem 01:

Write a program that prints the following using COUT statement.

(1):

```
*  
  
**  
  
***  
  
****  
  
    ****  
  
    ***  
  
    **  
  
    *
```

Code:

```
#include <iostream>  
using namespace std;  
  
int main() {  
cout << "*\n**\n***\n****\n\t****\n\t\t***\n\t\t\t**\n\t\t\t\t*";  
/*cout<<"*<<endl;  
    cout<<"**"<<endl;  
    cout<<"***"<<endl;  
    cout<<"****"<<endl;  
    cout<<"\t****"<<endl;  
    cout<<"\t\t***"<<endl;  
    cout<<"\t\t\t**"<<endl;  
    cout<<"\t\t\t\t*";  
*/  
return 0;  
}
```

Output:

```
*  
**  
***  
****  
  
    ****  
  
    ***  
  
    **  
  
    *
```

(2):

Code:

```
#include<iostream>
using namespace std;
int main(){
    cout << "      *\n    *\n  *\n *\n*\n*****\n";
    return 0;
}
```

Output:

```
      *
    *
  *
 *
*
*****
```

(3):

Code:

```
#include<iostream>
using namespace std;
int main (){
    cout<<"*****\n    *\n  *\n *\n *\n*****";
    return 0;
}
```

Output:

```
*****
 *
 *
 *
 *
*****
```

(4):

Code:

```
#include<iostream>
using namespace std;
int main() {
    cout<<"*\t*\n *      *\n *      *\n *      *\n *      *\n *      *\n *      *\n *      *\n *      *\n";
}
```

Output:

[illegible]

(5):

Code:

```
#include<iostream>
using namespace std;
int main(){
    cout<<"*****\n*\t*\n*\t*\n*\t*\n*****";
    return 0;
}
```

Output:

```
pw --pid=Microsoft-C++Engine-Pid=5815xmq.dns --dbgExe=C:\msys64\usr\bin\gdb.exe --interpreter=mi1
*****
*      *
*      *
*      *
*****
```

Problem 02:

Write a program that prints your second name (i.e. my second name is Ihsan) (10 Marks)

using COUT & setw statement.

Note: Use setw function instead of space character

Code:

```
#include <iostream>
#include <iomanip>
using namespace std;

int main()
{
    cout << setw(5) << "***" << setw(7) << "*   *" << setw(7) << "***" <<
    setw(6) << "***" << setw(8) << "*****" << endl;
    cout << setw(6) << "*   *" << setw(7) << "*   *" << setw(7) << "*   *" <<
    setw(6) << " * " << setw(8) << "*   " << endl;
    cout << setw(6) << "*****" << setw(7) << "* * *" << setw(7) << "*****" <<
    setw(6) << " * " << setw(8) << "***** " << endl;
    cout << setw(6) << "*   *" << setw(7) << "* * *" << setw(7) << "*   *" <<
    setw(6) << " * " << setw(8) << "      *" << endl;
    cout << setw(6) << "*   *" << setw(7) << "*   *" << setw(7) << "*   *" <<
    setw(6) << "***" << setw(8) << "***** " << endl;
    return 0;
}
```

Output:

```
*** *   *   ***   ***   *****
*   *   *   *   *   *   *   *
***** *   *   *****   *   *****
*   *   *   *   *   *   *   *
*   *   *   *   *   *   ***   *****
```

Problem 03:

Write a program to print the following using just COUT statement & setw () function

Code:

```
#include<iostream>
#include<iomanip>
using namespace std;

int main(){
    // Top half of diamond (including middle)
    cout<<setw(8)<<"*<<endl;
    cout<<setw(9)<<"***<<endl;
    cout<<setw(10)<<"*****<<endl;
    cout<<setw(11)<<"*****<<endl;
    cout<<setw(12)<<"*****<<endl;
    cout<<setw(11)<<"*****<<endl;
    cout<<setw(10)<<"*****<<endl;
    cout<<setw(9)<<"***<<endl;
    cout<<setw(8)<<"*<<endl;

    return 0;
}
```

Output:

```
  *
 ***
*****
*****
*****
*****
*****
  *
  *
```