```
//1. Problem_name: perfect_number.

#include <iostream>
using namespace std;

int main() {
   int n,i=1,res=0;
   cout << "Enter a number: ";
   cin >> n;
   while(i<n) {
      if(n%i==0)
         res=res+i;
      i++;
   }

   if(res==n)
      cout << i << " is a perfect number\n";
   else
      cout << i << " is not a perfect number\n";


   return 0;
}
```

```
//2.problem_name: fibonacci_number

#include <iostream>
using namespace std;

int main() {
    int n;
    cout << "Enter the value of n: ";
    cin >> n;

    int a = 0, b = 1, c;
    cout << a << " " << b << " ";

    for (int i = 2; i < n; i++) {
        c = a + b;
        cout << c << " ";
        a = b;
        b = c;
    }
   cout <<0;
}
```

```
//3.problelm_name: find armstrong_number

#include<iostream>
using namespace std;

int main()
{
	int ord1, ord2, ord3, sum;

	cout << "All the Armstrong numbers between 1 to 1000 : ";

	for (int num = 1; num <= 1000; ++num)
	{

		if (num <= 9)
		{
			cout << num << " ";
		}
		else
		{
			ord1 = num % 10;
			ord2 = (num % 100 - ord1) / 10;
			ord3 = (num % 1000 - ord2) / 100;

			sum = ((ord1 * ord1 * ord1) +
					(ord2 * ord2 * ord2) +
					(ord3 * ord3 * ord3));
			if (sum == num)
			{
				cout << num << " ";
			}
		}
	}
	return 0;
}
```

```
//4.grading_system.
#include <iostream>
using namespace std;


int main() {
   int marks;
   cout << "Enter the marks obtained: ";
   cin >> marks;
   switch(marks) {
   case 80 ... 100:
      cout <<"A+";
      break;
   case 75 ... 79:
      cout<< "A";
      break;
   case 70 ... 74:
      cout<< "A-";
      break;
   case 65 ... 69:
      cout<<  "B+";
      break;
   case 60 ... 64:
      cout<< "B";
      break;
   case 55 ... 59:
      cout<< "B-";
      break;
   case 50 ... 54:
      cout<< "C+";
      break;
   case 45 ... 49:
      cout<< "C";
      break;
   case 40 ... 44:
      cout<<  "D";
      break;

   default :
```

```
        cout<<  "F";
    }

}
```

//5.function

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

float product(float a, int b) {
    return a * b;
}
int main() {
    float x;
    int y;
    cin >> x >> y;
    cout << product(x, y) << endl;
    return 0;
}
```