الاسم / محمد عبدالرحمن ابوالقاسم

مجموعه / 4

Sheet 3

Exercise 1:

```
#include<iostream>
using namespace std;
void main()
{
   int n , factorial = 1;
   cout << "Enter your number: ";
   cin >> n;
   for (int i = 1; i <=n; ++i){
      factorial *= i;
   }
   cout << "Factorial of " << n << " = " << factorial;
   system("pause");
}
```

Exercise 2:

```
#include<iostream>
using namespace std;
void main()
{
   int n ;
   cout << "Enter your number: ";
   cin >> n;
   for (int i = 1; i <=n; ++i){

          if (n%i==0){
                 cout<<i<<" ";
          }
   }
system("pause");
}
```

Exercise 3:

```
#include<iostream>
using namespace std;
void main()
{
   for (int i = 1; i <= 100; ++i){
          i+=2;
          cout<<i<<" ";
   }
```

```
        system("pause");
}
```

Exercise 4:

```
#include <iostream>
using namespace std;
void main()
{
  float value, sum = 0;
  for(int i=1;i<=100;i++) {
      cin >> value;
      sum+=value;
   }
   cout <<"The average is "<< sum/100 << endl;
   system("pause");
}
```

Exercise 5:

```
#include <iostream>
#include <iomanip>
#include <cmath>
using namespace std;
void main()
{
        cout<< setw(2)<<"x"<<setw(12)<<"x2"<<setw(12)<<"x3+5"<<endl;
        for(int i=1;i<=5;i++){
                cout<< setw(2)<<i<<setw(12)<<pow(i,2)<<setw(12)<<pow(i,3)+5<<endl;
        }
   system("pause");
}
```

Exercise 6:

```
#include <iostream>
#include <iomanip>
using namespace std;
void main()
{
        for(int i=1;i<=210;i++){
                i+=6;
                cout<<setw(12)<<i;
   }
   system("pause");
}
```

Exercise 7:

```
#include <iostream>
using namespace std;
void main()
{

   int i,space,k=0;
   for(i=1;i<=5;++i)
   {
      for(space=1;space<=5-i;++space)
      {
        cout<<"  ";
      }
      while(k!=2*i-1)
      {
        cout<<"* ";
        ++k;
      }
      k=0;
      cout<<"\n";
   }
}
```

Exercise 8:

a-	2 3 3 4 4 5	b-	5 10
C-	ZYXWVUTSRQPONMLKJIHGFEDCBA	d-	81 27 9 3 1

e-	1 2 4 5 6	f-	4 5 6
g-		h-	1 2 3
i-	B C D	j-	3 4 5 6 7 8

Exercise 9:

```
#include <iostream>
using namespace std;
void main()
{
	for (int i = 0; i <= 100; i++)
	{
		if (i%2==0)
		{
			cout<<i<<endl;
		}
	}
}
```

Exercise 10:

```
// I don't the idea or what he need in this question
#include <iostream>
#include <iomanip>
using namespace std;
void main()
{
```

```
	int n;
	for (int i = 1; i <= 10; i++)
	{
		cin>>n;
	}
}
```

Exercise 11:

```
#include <iostream>
#include <iomanip>
using namespace std;
void main()
{
	int n;
	for (int i = 1; i <= 10; i++)
	{
		cin>>n;
		if (n>10)
		{
			cout<<n<<endl;
		}
	}
}
```

Exercise 12:

```
#include <iostream>
using namespace std;
void main()
{
	int n , even_count=0, odd_count=0;
	for (int i = 1; i <= 10; i++)
	{
		cin>>n;
		if (n % 2 == 0) {
			even_count = even_count + 1;
		 }
	  if (n % 2 != 0){
			odd_count = odd_count + 1;
		 }
	}
	  cout << "You had " << even_count << " even numbers and ";
	  cout << odd_count << " odd numbers.";
}
```

Exercise 13:

```
#include <iostream>
using namespace std;
void main()
{
	int n , factorial = 1 ,sum=0;
```

```
	for (int i = 1; i <= 10; i++)
	{
		cin>>n;
		if(n>0){
		for (int i = 1; i <=n; ++i){
			factorial *= i;
		}
		sum += factorial ;
		}else
		{
			cout<<"you must enter only Positive Numbers" <<endl;
			break;
		}
	}
	cout<<"The Sum is : "<<sum<<endl;
}
```

Exercise 14:

```
#include <iostream>
using namespace std;
void main()
{
	int square , sum=0;
	for (int i = 10; i <= 20; i++)
	{
		square = i*i;
		sum+=square;
	}
	cout<<"The Sum Of squares of numbers is "<<sum<<endl;
}
```

Exercise 15:

```
#include <iostream>
#include <math.h>
using namespace std;
void cal_sin(float n)
{
	float accuracy = 0.0001, denominator, sinx, sinval;
	n = n * (3.142 / 180.0);
	float x1 = n;
	sinx = n;
	sinval = sin(n);
	int i = 1;
	do
	{
		denominator = 2 * i * (2 * i + 1);
		x1 = -x1 * n * n / denominator;
		sinx = sinx + x1;
		i = i + 1;
	} while (accuracy <= fabs(sinval - sinx));
	cout << sinx;
```

```
}
void main()
{
	int n;
	cout<<"enter your Angle :\n";
	cin>>n;
	cout<<"The Sin Of "<<n<<" Is ";cal_sin(n); cout<<endl;
}
```