Fundamentals of Programming

Lab Task: 4

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Task:1

Code:

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

int main() {
   int summation,num,i;
   while(i<10)
   {cout<<"Enter any Number..."<<endl;
      cin>>num;
   summation=summation+num;
   i++;

   }
   cout<<"The Sum of the First Ten Natural Numbers is:"<<summation<<endl;



   return 0;
}
```

Output:

```
Enter any Number...
6
Enter any Number...
7
Enter any Number...
5
Enter any Number...
8
Enter any Number...
3
Enter any Number...
8
Enter any Number...
3
Enter any Number...
9
Enter any Number...
5
Enter any Number...
6
The Sum of the First Ten Natural Numbers is:60
```

Task: 2

Code:

```
#include <iostream>

using namespace std;


int main() {

   int number, table, ans;

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

   cin>>number;

   for(table=1;table<=10;table++)

   {ans=number*table;

   cout<<number<<" x "<<table<<" = "<<ans<<endl;


   }


   return 0;
```

}

Output:

```
Enter any Number
16
16 x 1 = 16
16 x 2 = 32
16 x 3 = 48
16 x 4 = 64
16 x 5 = 80
16 x 6 = 96
16 x 7 = 112
16 x 8 = 128
16 x 9 = 144
16 x 10 = 160
```

Task: 3

Code:

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

int main()
{
   float f,num;
   cout<<"Enter any Number :"<<endl;
   cin>>num;
   for(f=num-1;f>=1;f--)
   {num*=f;}
   cout<<"The Factorial is :"<<num<<endl;


   return 0;
}
```

Output:

```
Enter any Number :
6
The Factorial is :720
```

Task: 4

Code:

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

int main() {

   int fib;
   cout << "Terms of the Fibonacci Sequence..";
   cin >> fib;

   float a = 0, b = 1, x;

   cout << "Fibonacci Sequence: "<<endl;

   for (int f = 0; f < fib; ++f) {
      if (f <= 1) {
         x = f;
      } else {
         x = a + b;
         a = b;
         b = x;
      }
      cout << x <<endl;
   }


   return 0;
}
```

Output:

```
Terms of the Fibonacci Sequence..11
Fibonacci Sequence:
0
1
1
2
3
5
8
13
21
34
55
```