TD N°04 language C++

Exercise 1 :

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

int main()
{

int i,ppt,x;

for(i=0;i<10;i++)
        {
        cout<<"Tapez un entier : ";cin>>x;
        if(i==0)ppt=x;else if(x<ppt)ppt=x;
        }

cout<<"Le plus petit vaut vaut : "<<ppt<<endl;

return 0;
}
```

Exercise 2 :

```cpp
#include<iostream.h>
using namespace std;
int main()

{
    int N;
    double somme = 0;
    cout << "Entrer un entier : "; cin >> N;
    if (N>=5) {
        for (int i=5; i<=N; i++) somme += i*i*i;
    }
    cout << "Somme des cubes de 5^3 a " << N << "^3 = " << somme << endl;
    cin.ignore();
    cin.get();
    return EXIT_SUCCESS;
}
```

Exercise 3 :

```cpp
#include<iostream>
using namespace std;
int main()
{
int i,u=3,N;

cout<<"Tapez N : ";cin>>N;

for(i=0;i<N;i++)
        u=u*3+4;

cout<<"u("<<N<<")="<<u<<endl;

return 0;
}
```

Exercise 4 :

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

int main()
{
int i,u=1,v=1,w,N;

cout<<"Tapez N : ";cin>>N;

w=1;

for(i=2;i<=N;i++)
        {
        w=u+v;
        u=v;
        v=w;
        }

cout<<"u("<<N<<")="<<w<<endl;

return 0;
}
```

Exercise 5 :

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

int main()
{
int N;
bool ok;

do
    {
    cout<<"Tapez N entre 0 et 20 :";cin>>N;
    ok= N<=20 && N>=0;
    if(!ok)cout<<"ERREUR RECOMMENCEZ"<<endl;continue;
    }while(!ok);

N=N+17;
cout<<"La valeur finale est : "<<N<<endl;

return 0;
}


// meilleur solution sans variable ok
// ni commande continue à la fin de la boucle
#include<iostream>
using namespace std;

int main()
{
int nn;
While (1)
    {
    cout<<"Entrer un entier entre 0 et 20 inclusif :";
    cin >> nn;
    if ((nn>=0) && (nn<=20)) break;
    cout << " erreur\n";
    }
cout << "\n";
cout << nn << " + 17 = " << nn+17 << "\n ^\n";
cin.get();
return 0;}
```

Exercise 6 :

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

int main()
{
int x=0,choix;

do
    {
    cout<<"x vaut "<<x<<endl;
    cout<<"1 : Ajouter 1"<<endl;
    cout<<"2 : Multiplier par 2"<<endl;
    cout<<"3 : Soustraire 4"<<endl;
    cout<<"4 : Quitter"<<endl;
    cout<<"Votre choix : ";cin>>choix;

    switch(choix)
        {
        case 1 : x++;break;
        case 2: x=x*2; break;
        case 3: x=x-4;break;
        }
}while(choix!=4);

cout<<"La valeur finale de x vaut : "<<x<<endl;

return 0;
}
```