

TD POO :

EXERCICE 01 :

```
#include <iostream>

using namespace std ;

/////////////////////////////////

typedef struct date
{
    int a;
    int b ;
};

/////////////////////////////////

class rationnel
{
private :
    date x,y ;
public :
    void lecture (int, int );
    int affiche ();

};

/////////////////////////////////

void rationnel::lecture (int c , int d )
{
    date z;
    z.a= c;
    z.b= d ;

}
```

```
////////////////////////////////////
```

```
void rationnel::affiche ()
```

```
{
```

```
    date z ;
```

```
    cout << z.a << z.b ;
```

```
}
```

```
////////////////////////////////////
```

```
int main()
```

```
{
```

```
    rationnel x , y;
```

```
    x.lecture(-1,3) ;
```

```
    y.lecture(3,27) ;
```

```
    cout<<"\n x= " ;
```

```
    x.affiche() ;
```

```
    cout<<"\n y=" ;
```

```
    y.affiche() ;
```

```
}
```

EXERCICE 02 :

```
#include <iostream>
```

```
using namespace std ;
```

```
class time
```

```
{
```

```
    private :
```

```
    int heure ;
```

```
    int minutes ;
```

```
    int secondes ;
```

```
    public :
```

```
    void lecture (int,int,int);
```

```
    int Heuress ();
```

[illegible]

```

        cout << "\n la seconde actuelle  est "<< secondes ;

    }

    //////////////////////////////////////

void time::normalize()
{
do
{
    cout << "\n donner l'heure ";
    cin >> heure ;
}
while ((heure<0) || (heure>24));
do
{
    cout << "\n donner la minute ";
    cin >> minutes ;
}
while ((minutes<0) || (minutes>60));
do
{
    cout << "\n donner la seconde ";
    cin >> secondes ;
}
while ((secondes<0) || (secondes>60));

}

////////////////////////////////////

void time::advance ( int h, int m, int s)
{

```

```
heure=heure+h;
minutes=minutes+m;
secondes= secondes+s;
```

```
}
```

```
////////////////////////////////////
```

```
void time::reset (int h, int m, int s )
```

```
{
```

```
heure=h;
```

```
minutes=m;
```

```
secondes=s;
```

```
}
```

```
////////////////////////////////////
```

```
void time::print (){
```

```
    cout << "\n l'heure est "<< heure <<":"<< minutes <<":" <<secondes ;
```

```
}
```

```
////////////////////////////////////
```

```
int main ()
```

```
{
```

```
time T;
```

```
T.normalize();
```

```
T.Heuress();
```

```
T.Minutes();
```

```
T.Secondes();
```

```
T.lecture(1,2,3);
```

```
T.advance(1,2,3);
```

```
T.print();
```

```
T.reset(0,0,0);
```

```
T.print();}
```