

## CORRECTION du DS

### Exercice 1

```
void Fibonacci(vecteur u, int n){
    int i;
    u[0]=1;
    u[1]=1;
    for(i=2;i<=n;i++)
        u[i]=u[i-1]+u[i-2];
}
```

### Exercice 2

```
+poire:/net/raid3/aval/aval/A-texte/TD/MIAS302/DS$ ./xo2plus
```

Entrer une chaine de caracteres : ILE

Entrer une autre chaine de caracteres : EXILS

- Pour SW :

```
ch1 = ILE, ch2 = EXILS
```

```
  i = 0, t = 1
```

```
    j = 0, ch2[j] = E, ch1[i] = I, t = 1
```

```
    j = 1, ch2[j] = X, ch1[i] = I, t = 1
```

```
    j = 2, ch2[j] = I, ch1[i] = I, t = 0
```

```
  i = 1, t = 1
```

```
    j = 3, ch2[j] = L, ch1[i] = L, t = 0
```

```
  i = 2, t = 1
```

```
    j = 4, ch2[j] = S, ch1[i] = E, t = 1
```

```
SW : 0
```

- Pour dSW : (SW modifie)

```

ch1 = ILE, ch2 = EXILS
  i = 0, t = 1
    j = 0, ch2[j] = E, ch1[i] = I, t = 1
    j = 1, ch2[j] = X, ch1[i] = I, t = 1
    j = 2, ch2[j] = I, ch1[i] = I, t = 0
  i = 1, t = 1
    j = 0, ch2[j] = E, ch1[i] = L, t = 1
    j = 1, ch2[j] = X, ch1[i] = L, t = 1
    j = 2, ch2[j] = I, ch1[i] = L, t = 1
    j = 3, ch2[j] = L, ch1[i] = L, t = 0
  i = 2, t = 1
    j = 0, ch2[j] = E, ch1[i] = E, t = 0
dSW : 1

```

```
+poire:/net/raid3/aval/aval/A-texte/TD/MIAS302/DS$
```

*La fonction SW teste si ch1 est un sous-mot de ch2 (i.e. ch1 est obtenu en supprimant certaines lettres de ch2) : elle renvoie 1 si c'est le cas, et 0 sinon.*

*La fonction dSW teste si toutes les lettres de ch1 sont présentes dans ch2 : elle renvoie 1 si c'est le cas, et 0 sinon.*

### Exercice 3

```

int somme(poly P1, int n1, poly P2, int n2, poly S){
  int n, i, d=-1;
  if(n2>n1){
    n=n2;
    for(i=n1+1;i<=n;i++) P1[i]=0;
  }
  else{
    n=n1;
    for(i=n2+1;i<=n;i++) P2[i]=0;
  }
  for(i=0;i<=n;i++){
    S[i]=P1[i]+P2[i];
    if(S[i]) d=i;
  }
  return d;
}

```

```
void derivee(poly P, int n, poly D){
    int i;
    for(i=0;i<=n;i++)
        D[i]=(i+1)*P[i+1];
}
```

```
void produit(poly P1, int n1, poly P2, int n2, poly P){
    int i, j;
    for(i=0;i<=n1+n2;i++)
        P[i]=0;
    for(i=0;i<=n1;i++)
        for(j=0;j<=n2;j++)
            P[i+j]+=P1[i]*P2[j];
}
```