**Nom : NAIT MIHOUB Prénom : Ayoub Matricule : 191931047451 Groupe : 2**

**Partie 3 : Le Langage Caml**

**1/** let Comp s n = if n > string\_length s then false else if (49<int\_of\_string(sub\_string s (n-1) 2) && int\_of\_string(sub\_string s (n-1) 2)< 100 ) then true else false ;;

**2/** let rec SC s p = if (string\_length s < string\_length p) then false else if (s.[0]= p.[0])then if (sub\_string s 0 (string\_length p)= p) then true else SC (sub\_string s 1 ((string\_length s)-1)) p else SC (sub\_string s 1 ((string\_length s)-1)) p;;

**3/ a)** let rec Tripl (a,b) = if (a=[] && b=[]) then [] else if (a=[]) then(hd(b),0,0):: Tripl ([], tl(b)) else if (b=[]) then(hd(a),0,1):: Tripl(tl(a),[]) else( hd(a) + hd(b) ,hd(a)\*hd(b),int\_of\_float(float\_of\_int(hd(a))\*\*float\_of\_int(hd(b)))):: Tripl(tl(a),tl(b));;

**b)**

#Tripl ([4;5;6;9],[1;3;5]);;

- : (int \* int \* int) list = [5, 4, 4; 8, 15, 125; 11, 30, 7776; 9, 0, 1]

**4/ a)** let rec Fus (x, y) = if x = [] then y else if y = [] then x else if hd(x)< hd(y) then hd(x)::Fus (tl(x), y) else if hd(x) = hd(y) then hd(x) :: Fus (tl(x), tl(y)) else hd(y) :: Fus (x, tl(y));;

**b)**

#Fus (["zoubir";"sofiane";"nabih"],["abdou";"ayoub"]);;

- : string list = ["zoubir"; "sofiane"; "nabih";"abdou"; "ayoub"]