Ordonnancement

# 2. Ordonnancement préemptif

5 processus A,B,C,D,E nécessitent respectivement 10,6,2,4,8 unités de temps. Quantum = 2

1. On suppose que les processus ne font pas d’E/S. Calculer et comparer, le temps CPU total, le temps de latence moyen et le temps d’exécution moyen dans les deux cas suivants
2. En considérant que les processus sont lancés dans l’ordre du plus court d’abord.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| C | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D | 4 | 2 | 2 | 2 | 2 | 0 |  |  |  |  |  |  |  |  |  |
| B | 6 | 6 | 4 | 4 | 4 | 4 | 2 | 2 | 2 | 0 |  |  |  |  |  |
| E | 8 | 8 | 8 | 6 | 6 | 6 | 6 | 4 | 4 | 4 | 2 | 2 | 0 |  |  |
| A | 10 | 10 | 10 | 10 | 8 | 8 | 8 | 8 | 6 | 6 | 6 | 4 | 4 | 2 | 0 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A |  |  |  |  | - |  |  |  | - |  |  | - |  | - | -| |
| B |  |  | - |  |  |  | - |  |  | -| |  |  |  |  |  |
| C | -| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D |  | - |  |  |  | -| |  |  |  |  |  |  |  |  |  |
| E |  |  |  | - |  |  |  | - |  |  | - |  | -| |  |  |

Texe : A = 30 ; B = 20 ; C = 2 ; D = 12 ; E = 26 ;

X(Texe(N)) = (30 + 20 + 2 +12 + 26)/5 = 18

1. En considérant que les processus sont lancés dans l’ordre d’arrivé

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | 8 |  |  |  |  | 6 |  |  |  | 4 |  |  | 2 |  | 0 |
| B | 6 | 4 |  |  |  |  | 2 |  |  |  | 0 |  |  |  |  |
| C | 2 |  | 0 |  |  |  |  |  |  |  |  |  |  |  |  |
| D | 4 |  |  | 2 |  |  |  | 0 |  |  |  |  |  |  |  |
| E | 8 |  |  |  | 6 |  |  |  | 4 |  |  | 2 |  | 0 |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | - |  |  |  |  | - |  |  |  | - |  |  | - |  | -| |
| B |  | - |  |  |  |  | - |  |  |  | -| |  |  |  |  |
| C |  |  | -| |  |  |  |  |  |  |  |  |  |  |  |  |
| D |  |  |  | - |  |  |  | -| |  |  |  |  |  |  |  |
| E |  |  |  |  | - |  |  |  | - |  |  | - |  | -| |  |

Texe : A = 30 ; B = 22 ; C = 6 ; D = 16 ; E = 28

X(Texe(N)) = (30 + 22 + 6 +16 +28)/5 = 20,4

1. On suppose chaque processus fait une E/S
2. On ne fait rien durant la fin du quanta et on attend la suivante
3. On attend la suivante pour changer de processus