

Operációs rendszerek Bsc

7.gyak
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Készítette:
Szabó Bálint Bsc
Programtervező informatikus
EJX162

1. feladat
RR nélkül

| | A process | | B process | | C process | | D process | | Reschedule | |
|----------------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|----------------|---------------|
| Clock tick | p_uspri | p_cpu | p_uspri | p_cpu | p_uspri | p_cpu | p_uspri | p_cpu | running before | running after |
| Starting point | 60 | 0 | 60 | 0 | 60 | 0 | 60 | 0 | A | A |
| 1 | 60 | 1 | 60 | 0 | 60 | 0 | 60 | 0 | A | A |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | A | A |
| 99 | 60 | 99 | 60 | 0 | 60 | 0 | 60 | 0 | A | A |
| 100 | 73 | 50 | 60 | 0 | 60 | 0 | 60 | 0 | A | B |
| 101 | 73 | 50 | 60 | 1 | 60 | 0 | 60 | 0 | B | B |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | | |
| 199 | 73 | 50 | 60 | 99 | 60 | 0 | 60 | 0 | B | B |
| 200 | 66 | 25 | 73 | 50 | 60 | 0 | 60 | 0 | B | C |
| 201 | 66 | 25 | 73 | 50 | 60 | 1 | 60 | 0 | C | C |

$$p_cpu = 100/0,5 = 50$$

$$p_uspri(1) = P_USER + 50 / 4 + 2 * p_nice = 73$$

$$p_uspri(2) = P_USER + 25 / 4 + 2 * p_nice = 66$$

RR-rel

| | A process | | B process | | C process | | D process | | Reschedule | |
|----------------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|----------------|---------------|
| Clock tick | p_uspri | p_cpu | p_uspri | p_cpu | p_uspri | p_cpu | p_uspri | p_cpu | running before | running after |
| Starting point | 60 | 0 | 60 | 0 | 60 | 0 | 60 | 0 | A | A |
| 1 | 60 | 1 | 60 | 0 | 60 | 0 | 60 | 0 | A | A |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | A | A |
| 9 | 60 | 9 | 60 | 0 | 60 | 0 | 60 | 0 | A | A |
| 10 | 60 | 10 | 60 | 0 | 60 | 0 | 60 | 0 | A | B |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | | |
| 19 | 60 | 10 | 60 | 9 | 60 | 0 | 60 | 0 | B | B |
| 20 | 60 | 10 | 60 | 10 | 60 | 0 | 60 | 0 | B | C |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | | |
| 29 | 60 | 10 | 60 | 10 | 60 | 9 | 60 | 0 | C | C |
| 30 | 60 | 10 | 60 | 10 | 60 | 10 | 60 | 0 | C | D |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | | |
| 39 | 60 | 10 | 60 | 10 | 60 | 10 | 60 | 9 | D | D |
| 40 | 60 | 10 | 60 | 10 | 60 | 10 | 60 | 10 | D | A |
| 50 | 60 | 20 | 60 | 10 | 60 | 10 | 60 | 10 | A | B |
| 60 | 60 | 20 | 60 | 20 | 60 | 10 | 60 | 10 | B | C |
| 70 | 60 | 20 | 60 | 20 | 60 | 20 | 60 | 10 | C | D |
| 80 | 60 | 20 | 60 | 20 | 60 | 20 | 60 | 20 | D | A |
| 90 | 60 | 30 | 60 | 20 | 60 | 20 | 60 | 20 | A | B |
| 100 | 67 | 26 | 67 | 26 | 64 | 17 | 64 | 27 | B | C |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | | |
| 199 | 67 | 46 | 67 | 46 | 64 | 37 | 64 | 46 | D | D |
| 200 | 70 | 39 | 70 | 39 | 68 | 31 | 70 | 40 | D | A |
| 201 | 70 | 40 | 70 | 39 | 68 | 31 | 70 | 40 | A | A |

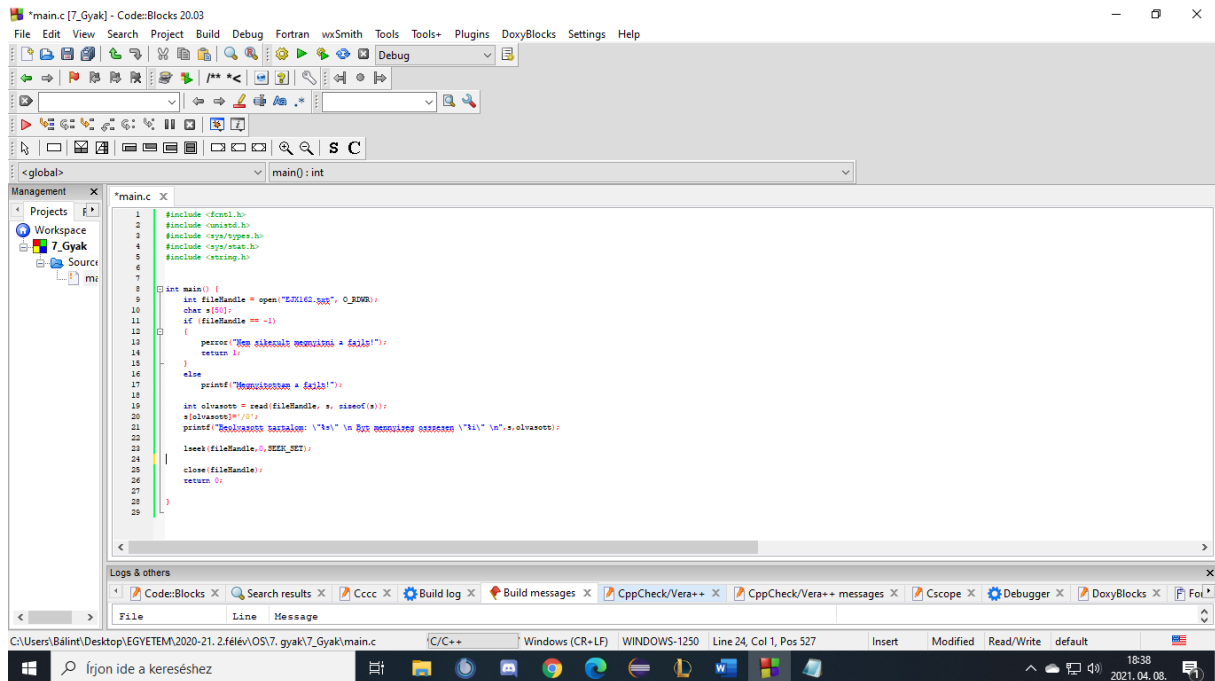
100. óráütnésnél:

- $KF = 2 \cdot FK / (2 \cdot FK + 1) = (2 \cdot 3) / (2 \cdot 3 + 1) = 0,85$
- $A \text{ p_cpu} = 30 \cdot 0,85 = 26$ $A \text{ p_uspri} = 60 + (26/4) = 67$
- $B \text{ p_cpu} = 30 \cdot 0,85 = 26$ $B \text{ p_uspri} = 60 + (26/4) = 67$
- $C \text{ p_cpu} = 20 \cdot 0,85 = 17$ $C \text{ p_uspri} = 60 + (17/4) = 64$
- $D \text{ p_cpu} = 20 \cdot 0,85 = 17$ $D \text{ p_uspri} = 60 + (17/4) + 10 = 74$

200. óráütnésnél:

- $KF = 2 \cdot FK / (2 \cdot FK + 1) = (2 \cdot 3) / (2 \cdot 3 + 1) = 0,85$
- $A \text{ p_cpu} = 30 \cdot 0,85 = 39$ $A \text{ p_uspri} = 60 + (26/4) = 70$
- $B \text{ p_cpu} = 30 \cdot 0,85 = 39$ $B \text{ p_uspri} = 60 + (26/4) = 70$
- $C \text{ p_cpu} = 20 \cdot 0,85 = 31$ $C \text{ p_uspri} = 60 + (17/4) = 68$
- $D \text{ p_cpu} = 20 \cdot 0,85 = 40$ $D \text{ p_uspri} = 60 + (17/4) + 10 = 70$

2. feladat



```
1 #include <fcntl.h>
2 #include <unistd.h>
3 #include <sys/types.h>
4 #include <sys/stat.h>
5 #include <string.h>
6
7
8 int main() {
9     int fileHandle = open("EXERCISE_000", O_RDWR);
10     char s[50];
11     if (fileHandle == -1)
12     {
13         perror("Nem sikerült megnyitni a fájlt");
14         return 1;
15     }
16     else
17     {
18         printf("Megnyitottam a fájlt");
19
20         int olvasato = read(fileHandle, s, sizeof(s));
21         s[olvasato] = '\0';
22         printf("Beolvasott szöveg: \"%s\" \n But megmutatok valamit \"%s\" \n", s, olvasato);
23
24         lseek(fileHandle, 0, SEEK_SET);
25
26         close(fileHandle);
27         return 0;
28     }
29 }
```