

第九章课后练习

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9.6

- first-fit

process size	selected partition	condition after placing process
115 KB	300 KB	185 KB, 600 KB, 350 KB, 200KB, 750 KB, 125 KB
500 KB	600 KB	185 KB, 100 KB, 350 KB,200 KB, 750 KB, 125 KB
358 KB	750 KB	185 KB, 100 KB, 350 KB,200 KB, 392 KB, 125 KB
200 KB	350-KB	185 KB, 100 KB, 150 KB,200 KB, 392 KB, 125 KB
375 KB	392-KB	185 KB, 100 KB, 150 KB,200 KB, 17 KB, 125 KB

- best-fit

process size	selected partition	condition after placing process
115 KB	125 KB	300 KB, 600 KB, 350 KB, 200 KB, 750 KB, 10 KB
500 KB	600 KB	300 KB, 100 KB, 350 KB, 200 KB, 750 KB, 10 KB
358 KB	750 KB	300 KB, 100 KB, 350 KB, 200 KB, 392 KB, 10 KB
200 KB	200 KB	300 KB, 100 KB, 350 KB, 0 KB, 392 KB, 10 KB
375 KB	392 KB	300 KB, 100 KB, 350 KB, 0 KB, 17 KB, 10 KB

- Worst-fit

process size	selected partition	condition after placing process
115 KB	750 KB	300 KB, 600 KB, 350 KB, 200 KB, 750 KB, 10 KB
500 KB	635 KB	300 KB, 600 KB, 350 KB, 200 KB, 635 KB, 125 KB
358 KB	600 KB	300 KB, 600 KB, 350 KB, 200 KB, 135 KB, 125 KB
200 KB	350 KB	300 KB, 242 KB, 350 KB, 200 KB, 135 KB, 125 KB
375 KB	no fit one	300 KB, 242 KB, 150 KB, 200 KB, 135 KB, 125 KB

in this case, using the Worst-fit algorithm, there is not enough space for the process with size 375 KB and it must wait.

9.7

1KB=1024B

- a. $3085 / 1024 = 3 \dots 13$, so the page = 3, offset = 13
- b. $42095 / 1024 = 41 \dots 111$, so the page = 41, offset = 111
- c. $215201 / 1024 = 210 \dots 161$, so the page = 210, offset = 161
- d. $650000 / 1024 = 634 \dots 784$, so the page = 634, offset = 784
- e. $2000001 / 1024 = 1953 \dots 129$, so the page = 1953, offset = 129

9.9

offset位数: $4KB = 4096B = 2^{12}B$, 故需要12位

- a. logical address: $256pages = 2^8$, 故需要8位作为page寻址的位数, $8+12=20$ 位的logical address
- b. physical address: $64frames = 2^6$, 故需要6位作为frame寻址的位数, $6+12=18$ 位的physical address

9.10

- a. offset位数: $4KB = 4096B = 2^{12}B$, 故需要12位, 剩下20位, 故有 2^{20} 的entries
- b. $(512MB = 2^{19}B) / (4KB = 2^{12}B) = 2^7$ entries