Main Memory (Practice)

ICS332
Operating Systems

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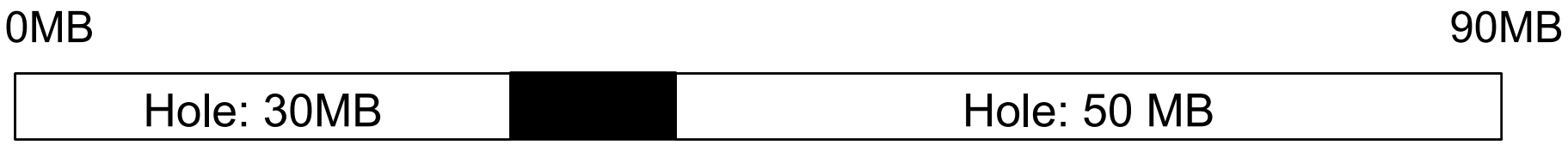
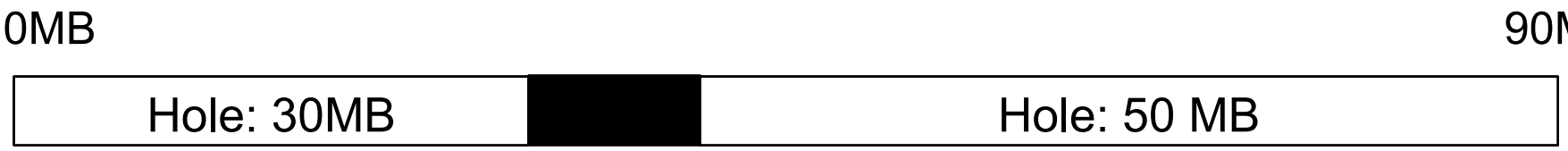
(q1) What will happen?



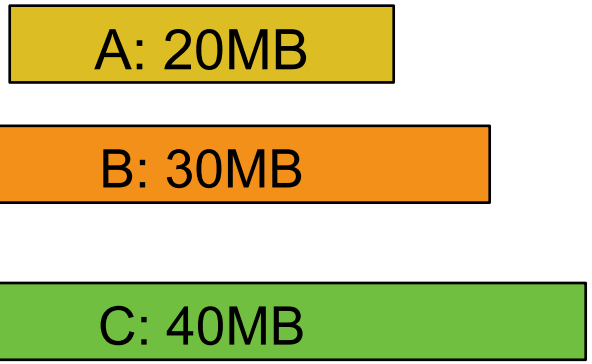
- Incoming processes:
  - in 10 seconds: A arrives
  - in 20 seconds: B arrives
  - in 30 seconds: A terminates
  - in 40 seconds: C arrives

- Algorithm used: **BestFit** (allocated at the beginning of holes)
- Can C be loaded into RAM when it arrives? If so, where?

(q1) Answer



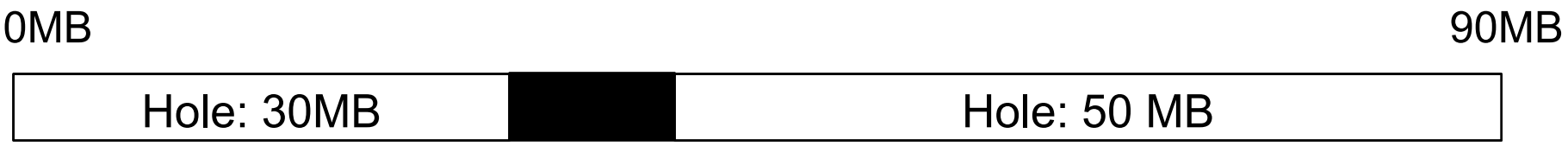
- Incoming processes:
  - in 10 seconds: A arrives
  - in 20 seconds: B arrives
  - in 30 seconds: A terminates
  - in 40 seconds: C arrives



- Algorithm used: **FirstFit** (allocated at the beginning of holes)
- Can C be loaded into RAM when it arrives? If so, where?

NO

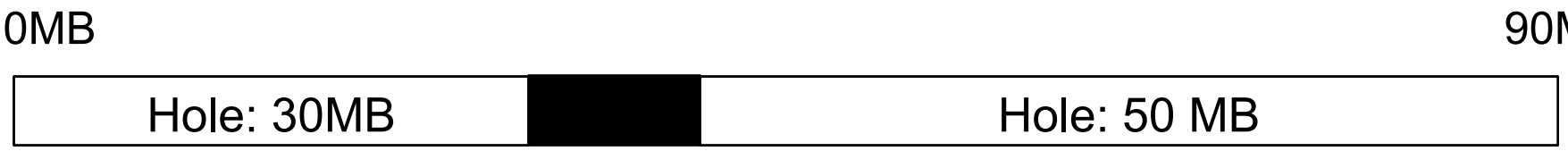
(q2) What will happen?



- Incoming processes:
  - in 10 seconds: A arrives
  - in 20 seconds: B arrives
  - in 30 seconds: A terminates
  - in 40 seconds: C arrives

- Algorithm used: **WorstFit** (allocated at the beginning of holes)
- Can C be loaded into RAM when it arrives? If so, where?

(q2) Answer

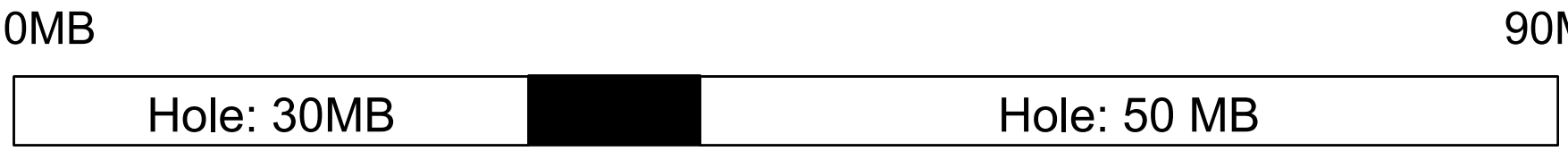


- Incoming processes:
  - in 10 seconds: A arrives
  - in 20 seconds: B arrives
  - in 30 seconds: A terminates
  - in 40 seconds: C arrives

- Algorithm used: **WorstFit** (allocated at the beginning of holes)
- Can C be loaded into RAM when it arrives? If so, where?

YES

(q2) Answer



- Incoming processes:
  - in 10 seconds: A arrives
  - in 20 secon
  - in 30 secon
  - in 40 secon

So, in this example, "worst" fit is better than "best" fit.

- Algorithm used: **WorstFit** (allocated at the beginning of holes)
- Can C be loaded into RAM when it arrives? If so, where?

YES

(q3) Which algorithm?

- With this ordered list of holes in RAM:
  - Hole #1: 20 MB
  - Hole #2: 100 MB
  - Hole #3: 30 MB
  - Hole #4: 80 MB
- A job that needs 60 MB is placed in Hole #4
- What algorithm was used?

(q3) Answer

- With this ordered list of holes in RAM:
  - Hole #1: 20 MB
  - Hole #2: 100 MB
  - Hole #3: 30 MB
  - Hole #4: 80 MB
- A job that needs 60 MB is placed in Hole #4
- What algorithm was used?

BestFit

(q4) Which algorithm?

- With this ordered list of holes in RAM:
  - Hole #1: 20 MB
  - Hole #2: 100 MB
  - Hole #3: 30 MB
  - Hole #4: 80 MB
- A job that needs 70 MB is placed in Hole #2
- What algorithm was used?

(q4) Which algorithm?

- With this ordered list of holes in RAM:
  - Hole #1: 20 MB
  - Hole #2: 100 MB
  - Hole #3: 30 MB
  - Hole #4: 80 MB
- A job that needs 70 MB is placed in Hole #2
- What algorithm was used?

Not sure: Either FirstFit or WorstFit