

Advanced Programming COEN 11

Project 8

Project 8

- Extend your program for project 6 to include an **extra thread**, which saves the waiting list in a **temporary binary file** every 20 seconds.
- Your thread is in a **loop forever**.
 - It **sleeps** for 20 seconds
 - When it wakes up, it **opens** the file and **traverses** the list, **writing** the info to the file.
 - Then **closes** the files and sleeps again.

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□ Requirements

- Use a **lock!**
 - Because the list is shared by both the main and the extra threads.
 - Whenever you are changing the list or saving it.
- **Cancel** the thread when you are about to save the list at the end:

```
int pthread_cancel (thread_t thread);
```
- **Avoid** being in the middle of saving the data to the binary file when you cancel the thread.

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- The **name** of the **temporary file** could be
 - an argument to the program (argv[2]) or
 - a constant name (such as “temp.bin”).
- Add a **new command** to show the contents of the binary file at any moment.
 - Use **fread** to read into a temporary node.
 - And **printf** to show the name and number