Running User Programs in MP3 Checkpoint 2

ECE391

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To make user programs do the following in the /usr directory:

1. Write the user program, see `sysArg_test.c` for an example of an user program

   - Quick note on how you can either have `void` as input or
     `(int argc, char** argv)`

2. Within the `Makefile` make sure that UMODE is set to 1 instead of 0

3. Add a make target for the user program, refer to the `hello` target when making your own

4. Run the make command

   - `make <insert name of target>` or
   - `make all` if you added the target to `ALL_TARGETS`

5. Make the filesystem with the outputted binary, refer to the handout for how to make the filesystem

   Do the following in the `/sys` directory:

6. Make sure that the `ktfs.raw` is in `sys/`

7. In `sys/main.c` execute the binary from 5. using `process_exec`

8. Due to the lack of forking it is fine to panic out if the process exiting had tid = 0

   - The message outputted should be along the lines of "Main process exited"

   Note: If you think about an OS it never really exits which is why we will panic when the main process exits. This however is a result of our lack of forking and separate memory spaces which will resolve itself in checkpoint 3.