

CENG328

Operating Systems

Laboratory V

Shared Memory

1. Shared Memory Examples

- Using shared memory with `fork()` – [code56.c](#).
 - Analyze the code.
 - Compile and run the code.
 - Examine how the variables **dummy** and **shared_memory** behave.
- Two processes that increase a shared integer value – [code57.c](#).
 - Analyze the code.
 - Compile and run the code.
 - Examine the output.

1. Shared Memory Examples

- Server & client using multiple shared memory regions – `shm_server.c`, `shm_client.c`.
 - Multiple shared memory regions can be defined using different **keys**.
 - **IPC_CREAT** flag allows creating a memory segment.
 - **0666** is the mode of the region; which means it is **readable** (4) and **writable** (2) by the **user**, the **group**, and **others**.
 - Analyze both codes.
 - Compile both codes.
 - Execute server as:
`./shm_server`
 - Execute client as:
`./shm_client <key>`
- where the key is one of the keys defined in server.