Programming Problems : 3.20

Purpose : Implement pid manager for managing process identifiers.

Input : none

Output : none

OS : Linux

Capabilities :

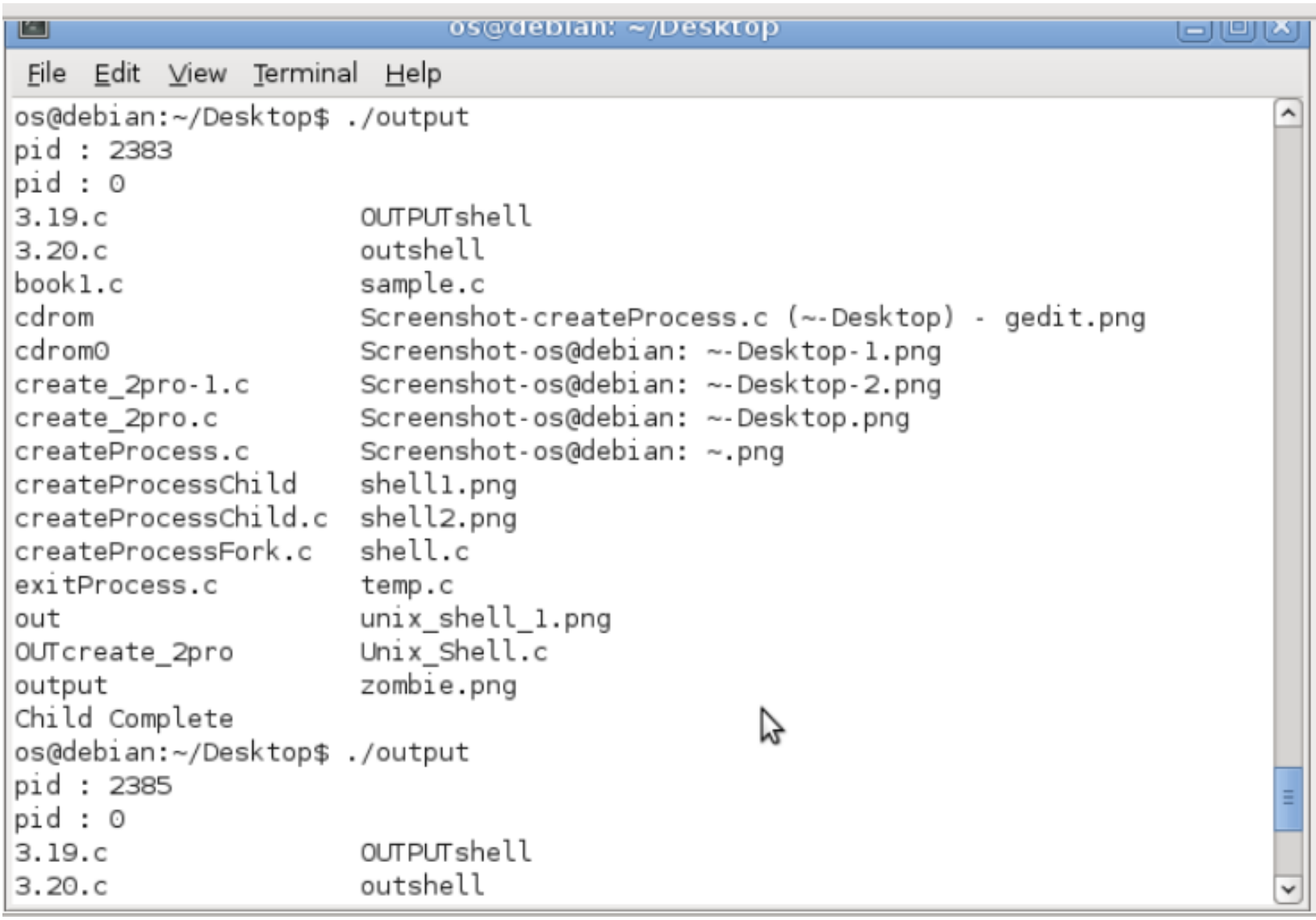
Implemented the following API for obtaining and releasing a pid:

• int allocate map(void)—Createsandinitializesadatastructure for representing pids; returns—1 if unsuccessful, 1 if successful

• int allocate pid(void)—Allocatesandreturnsapid;returns— 1 if unable to allocate a pid (all pids are in use)

• void release pid(int pid)—Releases a pid

define a structure containg pid and bitmap to store pid situation that a bitmap in which a value of 0 at position i indicates that a process id of value i is available and a value of 1 indicates that the process id is currently in use.



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