System Software lab

DESHIMA KK

S5 CSE

ROLL NO 22

Experiment 7:

Dining Philosopher problem

Compilation of CodePrerequisite

• The code is provided in the program.c file along with its documentation. You just need to run it on any compiler.

• Compile like gcc pgm.c -lpthread

.\a.exe

• The number of philosophers id hardcoded as 7 if want to

change at #define N <Any odd number>

• Here seven threads are created one for ech Philosopher

• Output of the file will be stored in the output.txt file as well

as terminal or compiler in which it is executed.

• As out 3 status are printed, if more needed you can remove

comments in code.

Output Screenshots

```
Microsoft Windows [Version 10.0.18362.900]
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C:\Users\Deshima\Desktop\d\exp6>gcc pgm.c
pgm.c:6:7: warning: built-in function 'fork' declared as non-function [-Wbuiltin-declaration
 sem_t fork[N];
       ^~~~
pgm.c: In function 'main':
pgm.c:40:58: warning: cast to pointer from integer of different size [-Wint-to-pointer-cast]
         pthread_create(&phil[i],NULL,(void *)philosopher,(void *)a[i]);
                                                          ^


C:\Users\Deshima\Desktop\d\exp6>.\a.exe

Philosoper 1 is Waiting to Eat
Philosoper 2 is Waiting to Eat
Philosoper 7 is Waiting to Eat
Philosoper 4 is Waiting to Eat
Philosopher 1 is Eating
Philosoper 5 is Waiting to Eat
Philosoper 6 is Waiting to Eat
Philosoper 3 is Waiting to Eat
Philosopher 1 Finished Eating
Philosopher 7 is Eating
Philosopher 4 is Eating
Philosopher 4 Finished Eating
Philosopher 2 is Eating
Philosopher 7 Finished Eating
Philosopher 2 Finished Eating
Philosopher 3 is Eating
Philosopher 3 Finished Eating
Philosopher 5 is Eating
Philosopher 5 Finished Eating
Philosopher 6 is Eating
Philosopher 6 Finished Eating
C:\Users\Deshima\Desktop\d\exp6>
```