

ID1217 HW4

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1 Introduction

1.1 Bear Bees

Our implementation of Bear bees uses a shared cell monitor which ensures mutually exclusive access to the "honey-in-pot" counter for both the bear and the bees. The two thread types interact with the honey through two methods "add honey" and "eat honey" respectively. Signaling is handled through the "add honey" method. A simple fairness analysis was constructed in order to judge if the different bees have equal access to the honey pot. The simulation length was 30s and the sleeptime was 20 ms.

Bee Index	Amount of Honey adds	Percentage of total
Total	4 899	100
1	1223	24.9
2	1225	25
3	1227	25.1
4	1224	25

1.2 Hungry Birds

A similar logical structure was implemented through a shared cell monitor. All interactions with the attribute "worm count" is handled with mutual exclusion through signaling from "add worms" method. An identical fairness test is performed.

Bird Index	Amount of worms eaten	Percentage of total
Total	4 925	100
1	1232	25
2	1233	25
3	1232	25
4	1228	25