1 ODD of model version 1 :

1.1 Purpose

The model was designed to make the simulations of the Bahria university cafeteria, our goal is that male and female students do not sit on the same side and after sitting on chairs they leave the cafeteria after some time.

1.2 State Variable and Scales

The main agent in this model is Students who represent an individual student of the university who comes to the cafeteria and sit there. The agent is different in their personal characteristic for instance, blue agent represents the male students and pink agent represents the female students. Behaviorally, agents are moving and goal-oriented toward a specific purpose at a given time. In this model activity is related to location which are tables and chairs there are 16 tables (black patches) and 64 chairs (yellow and green patches).

1.3 Process Overview and Scheduling

At each tick, each agent makes decision to sit on a chair but male and female agents do not sit on same side and after sitting there for some time they leave the cafeteria.

1.3.1 Design Concepts

Observation: The visualization window of model as shown in figure depicts the cafeteria with tables and chairs and it monitors the numbers of girls and boys in the cafeteria.

Emergence: The students come in cafeteria and both male and female student sit on opposite sides and after some time they leave the cafeteria.

1.4 Initialization

The simulation start with a specified number of students. There are 100 students in the cafeteria and waiting time of each student is set as 30 ticks.

1.5 input

The model did not include any external environmental variables

1.6 Submodel

Goal selection: Agents based decision making is a complex task, agents determine their activity based on their personal characteristic i.e. gender. They also consider the time when they make their goal choice. Both male and female students did not sit on same sides and after some time they leave the cafeteria

2 Behavior space experiments

Behavior space experiments of model 1 are shown in figure 1 to figure 4 of boys and girls respectively shows that all students come to cafeteria and leave after random time.

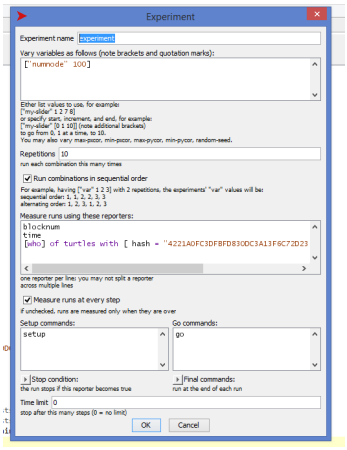

Figure 1: This is experiment to count the boys .

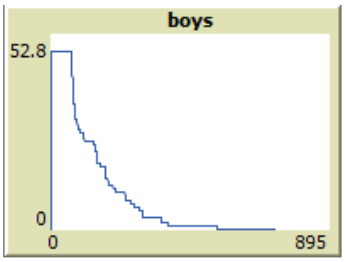

Figure 2: graph of boys.

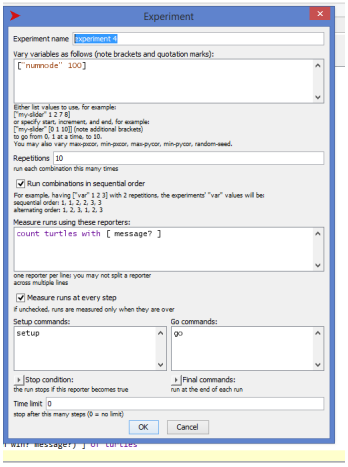

Figure 3: This is experiment to count the girls .

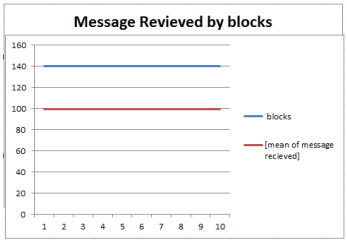

Figure 4: Graph of girls .