Parshvanath Charitable Trust's
A. P. SHAH INSTITUTE OF TECHNOLOGY
(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)
(Religious Jain Minority)

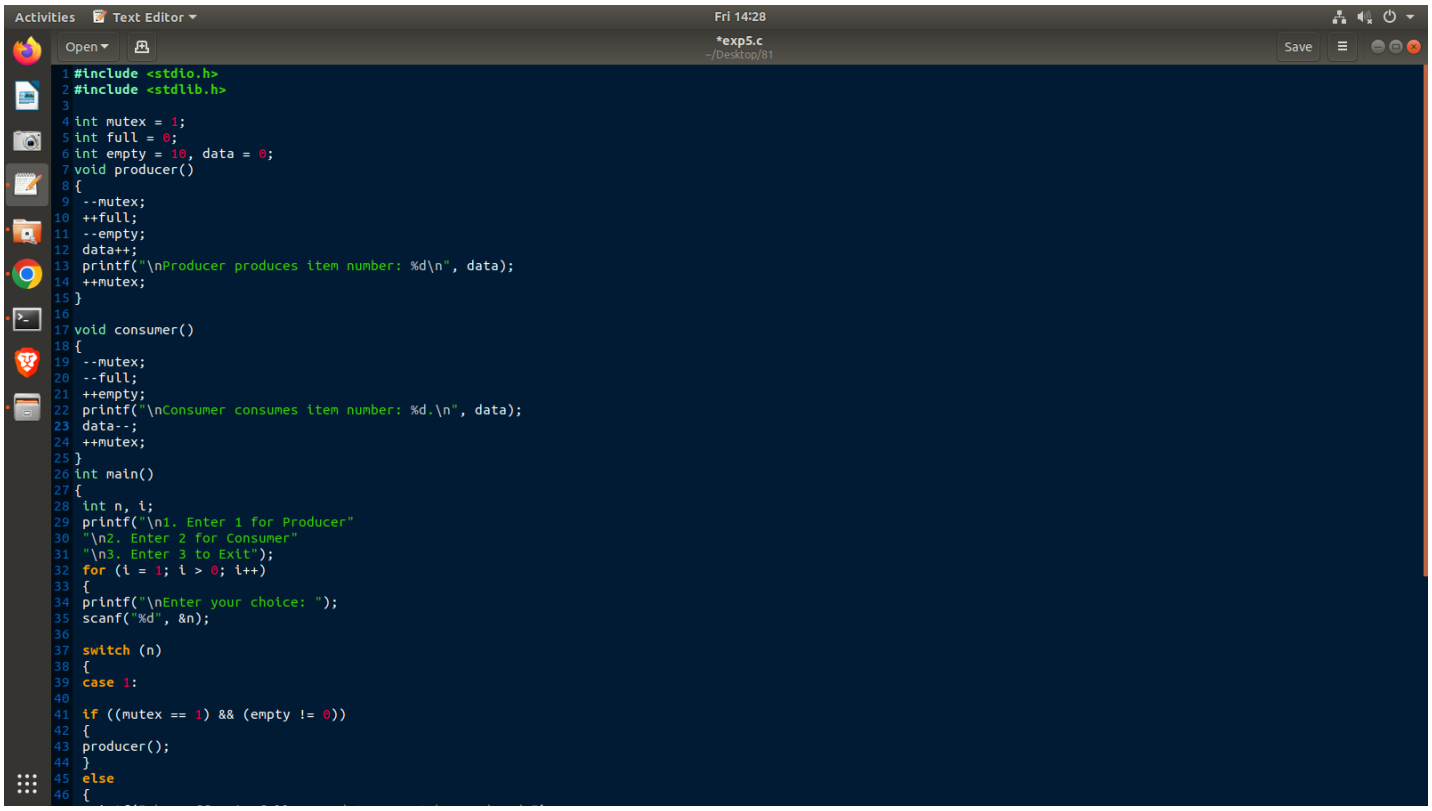
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING (ARTIFICIAL INTELLIGENCE & MACHINE LEARNING)

Academic Year: 2024-25 | **Name of Student: Pandey Kalash**
Semester: IV | **Student ID:23106049**
Class / Branch: SE AIML | **Date of Performance:28.02.25**
Subject: CSL403 Operating System Lab | **Date of Submission:28.02.25**
Name of Instructor: Prof. Poonam Tiware

Experiment No.5

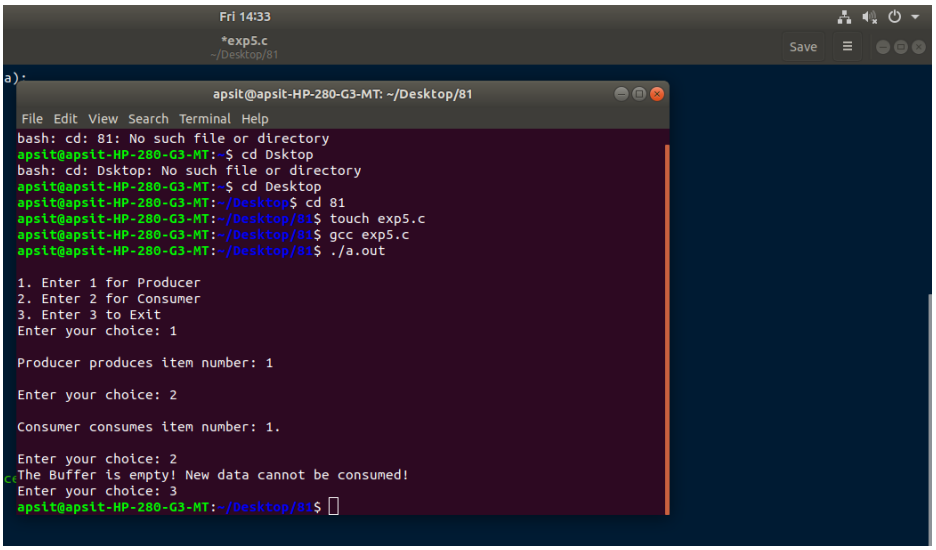
Aim: Write a C program to implement solution of Producer Consumer problem through semaphore.

Program:



```
45  else
46  {
47  printf("The Buffer is full. New data cannot be produced!");
48  }
49  break;
50  case 2:
51
52  if ((mutex == 1) && (full != 0))
53  {
54  consumer();
55  }
56
57  else
58  {
59  printf("The Buffer is empty! New data cannot be consumed!");
60  }
61  break;
62  case 3:
63  exit(0);
64  break;
65  }
66  }
67  }
```

Output:



Conclusion:

Hence, we have studied the implementation of producer & consumer problem using semaphore.