

Output of the code –

1-

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root@LAPTOP-I1SAH2N9:/mnt/d/2nd YEAR/4th SEM/OS/simulaton# nano p1.c
root@LAPTOP-I1SAH2N9:/mnt/d/2nd YEAR/4th SEM/OS/simulaton# gcc p1.c
root@LAPTOP-I1SAH2N9:/mnt/d/2nd YEAR/4th SEM/OS/simulaton# ./a.out
Student 1 has pen
Student 1 has question paper
Student 1 is making the assignment
Student 2 has paper
Teacher has the completed assignment
Student 3 has question paper
Student 2 has pen
Student 2 is making the assignment
Student 3 has paper
Student 3 is making the assignment
Teacher has the completed assignment
Teacher has the completed assignment
```

2-

```
root@LAPTOP-I1SAH2N9:/mnt/d/2nd YEAR/4th SEM/OS/simulaton# nano p2.c
root@LAPTOP-I1SAH2N9:/mnt/d/2nd YEAR/4th SEM/OS/simulaton# gcc p2.c
root@LAPTOP-I1SAH2N9:/mnt/d/2nd YEAR/4th SEM/OS/simulaton# ./a.out
Student 1 enters the library
Student 1 is getting the books issued
Student 1 leaves the library
Student 1 enters the library
Student 1 is getting the books issued
Student 1 leaves the library
Student 1 enters the library
Student 1 is getting the books issued
Student 2 enters the library
Student 2 is getting the books issued
Student 2 leaves the library
Student 1 leaves the library
Student 1 enters the library
Student 1 is getting the books issued
Student 1 leaves the library
Teacher 1 enters the library
Teacher 1 is getting the books issued
Teacher 1 leaves the library
Teacher 1 enters the library
Teacher 2 enters the library
Teacher 3 enters the library
Teacher 4 enters the library
```

3-

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root@LAPTOP-I1SAH2N9:/mnt/d/2nd YEAR/4th SEM/OS/simulaton# nano p3.c
root@LAPTOP-I1SAH2N9:/mnt/d/2nd YEAR/4th SEM/OS/simulaton# gcc p3.c
root@LAPTOP-I1SAH2N9:/mnt/d/2nd YEAR/4th SEM/OS/simulaton# ./a.out
Student 1 enters the library
Student 2 enters the library
Student 2 is getting the books issued
Student 2 leaves the library
Student 1 is getting the books issued
Student 1 leaves the library
Student 1 enters the library
Student 1 is getting the books issued
Student 2 enters the library
Student 3 enters the library
Student 3 leaves the library
Student 2 is getting the books issued
Student 2 leaves the library
Student 1 is getting the books issued
Teacher 1 enters the library
Teacher 1 is getting the books issued
Student 1 leaves the library
Teacher 2 enters the library
Teacher 3 enters the library
Teacher 4 enters the library
Teacher 5 enters the library
Teacher 5 leaves the library
```