WEEKS 10 & 11: Memory Management Problems **Date: 07/11/2020**

OBJECTIVE:

PROGRAM 1: Write a C program to implement paging using Best-fit algorithm

PROGRAM 2: Write a C program to implement Least Recently Used page replacement (LRU) algorithm.

- **CONCEPTS ARE ALREADY COVERED IN THEORY**
- **STUDENTS ARE ADVISED TO REFER TO THE TEXT BOOK, LECTURE MATERIAL AND PROGRAMS DEMONSTRATED IN THE CLASS TO IMPLEMENT THE GIVEN PROGRAMS.**
- **STUDENTS ARE REQUIRED TO PROVIDE PROOF OF CONDUCTION (AS PER SUBMISSION PROCEDURE BELOW).**

SUBMISSION:

1. **The source code files for both PROGRAM 1 and PROGRAM 2 should be uploaded to EDMODO in WORD or ZIP FORMAT.**
2. **All the screenshots clearly showing the directory name as YOURSRN_NAME_WEEK10-11 for both the programs should be uploaded to EDMODO in a SINGLE FILE (Word or PDF format only, Do NOT zip this file).**

Students should keep these TWO deliverables (i.e. 1 & 2 above) separate and NOT zip all the files together in order to facilitate quick, timely and effective evaluation.

Contact your respective Lab faculty for any questions or clarifications needed.

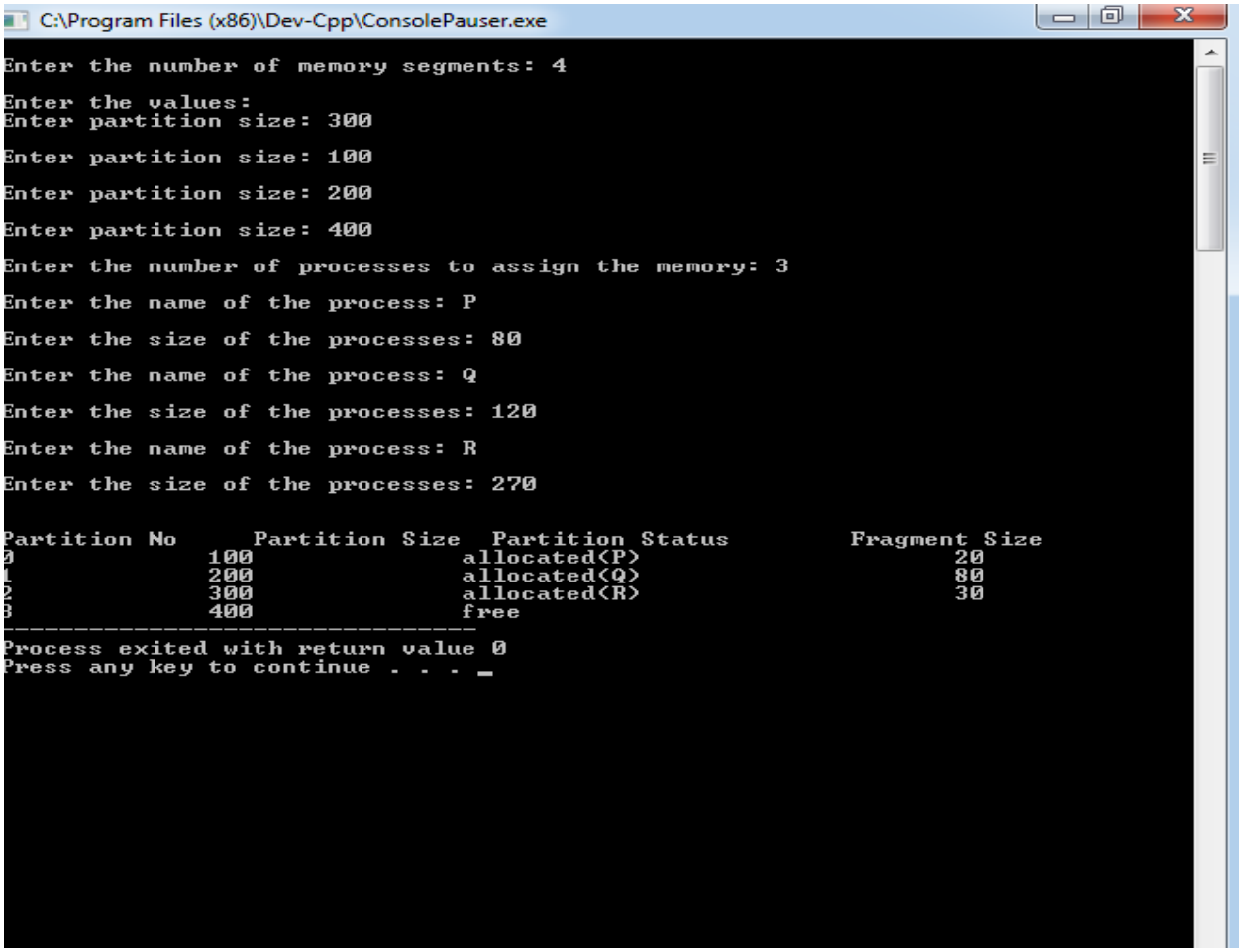
DUE DATE FOR SUBMISSION: SUBMIT BOTH PROGRAM 1 and PROGRAM 2 TOGETHER ON OR BEFORE 14/11/2020 11:59 PM

PROGRAMS FOR EXECUTION AND SUBMISSION:

PROGRAM 1: Write a C Program to implement paging using Best-fit algorithm

Sample Output:

Your output can slightly vary depending upon your implementation and the manner in which you are taking input values.



PROGRAM 2: Write a C Program to implement LRU algorithm

Define a reference string and number of frames for the input to your program as shown below and determine the total number of page faults

Your output can slightly vary depending upon your implementation and the manner in which you take input values

INPUT
Enter the length of reference string -- 20
Enter the reference string -- 7 0 1 2 0 3 0 4 2 3 0 3 2 1 2 0 1 7 0 1
Enter the number of frames -- 3

OUTPUT
The Page Replacement process is –
7 -1 -1 PF No. -- 1
7 0 -1 PF No. -- 2
7 0 1 PF No. -- 3
2 0 1 PF No. -- 4
2 0 1
2 0 3 PF No. -- 5
2 0 3
4 0 3 PF No. -- 6
4 0 2 PF No. -- 7
4 3 2 PF No. -- 8
0 3 2 PF No. -- 9
0 3 2
0 3 2
1 3 2 PF No. -- 10
1 3 2
1 0 2 PF No. -- 11
1 0 2
1 0 7 PF No. -- 12
1 0 7
1 0 7
The number of page faults using LRU is 12