CST8283 BUSINESS PROGRAMMING
Project 1

Due date – Wednesday June 17 at 5:00 pm.

COVER PAGE PROJECT 1 B

Lab Section number 302

Your initials are required below (Student Initials) certifying that the work submitted with this cover page is your own work, even if you have had help from me or other students. If you have used any documents provided by me, then you must state so in the Student Comments section below on this cover page and indicate what documents of mine you have used. If you do not use this cover page, I may not mark your submission.

____CYY_____
(Student Initials

Slides Reference

- SESSION2A HIERARCHY and FLOWCHARTS, page 10 – 20
- SESSION3 BASIC COBOL STRUCTURE, page 5-16
- SESSION4 ENVIRONMENT & DATA DIVISION, page 2-25
- SESSION5 PROCEDURE DIVISON (BASICS), page 4 - 49
- SESSION2A FLOWCHARTS example

Lab Requirements

The **program listing** will be examined primarily for:

1) relationship to function chart and flowchart;
2) use of prescribed commands;
3) application of standards and structures;
4) proper functional constructs (cohesion and coupling);
5) internal comments.

The **output reports (hard copy or screen display)** will be examined for accuracy of the output information and the prescribed format.

The **documentation** will be examined to ensure:

1) proper use of symbols (flowcharts);
2) proper structure and content of structure/function/hierarchy charts;
3) clear and accurate report or screen layouts (if required);
4) clear description or comments of the program logic.

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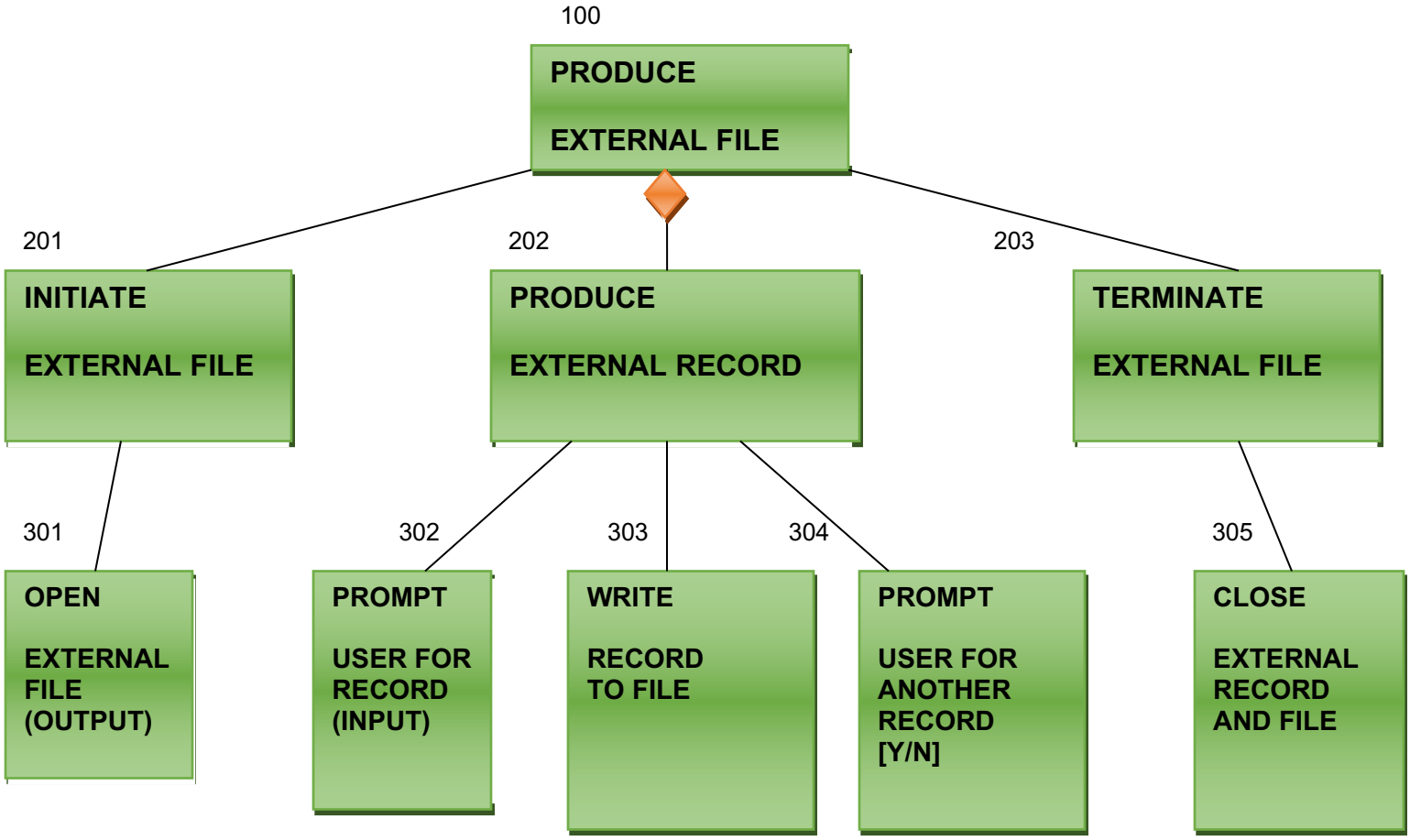
Structure/Function/Hierarchy Charts



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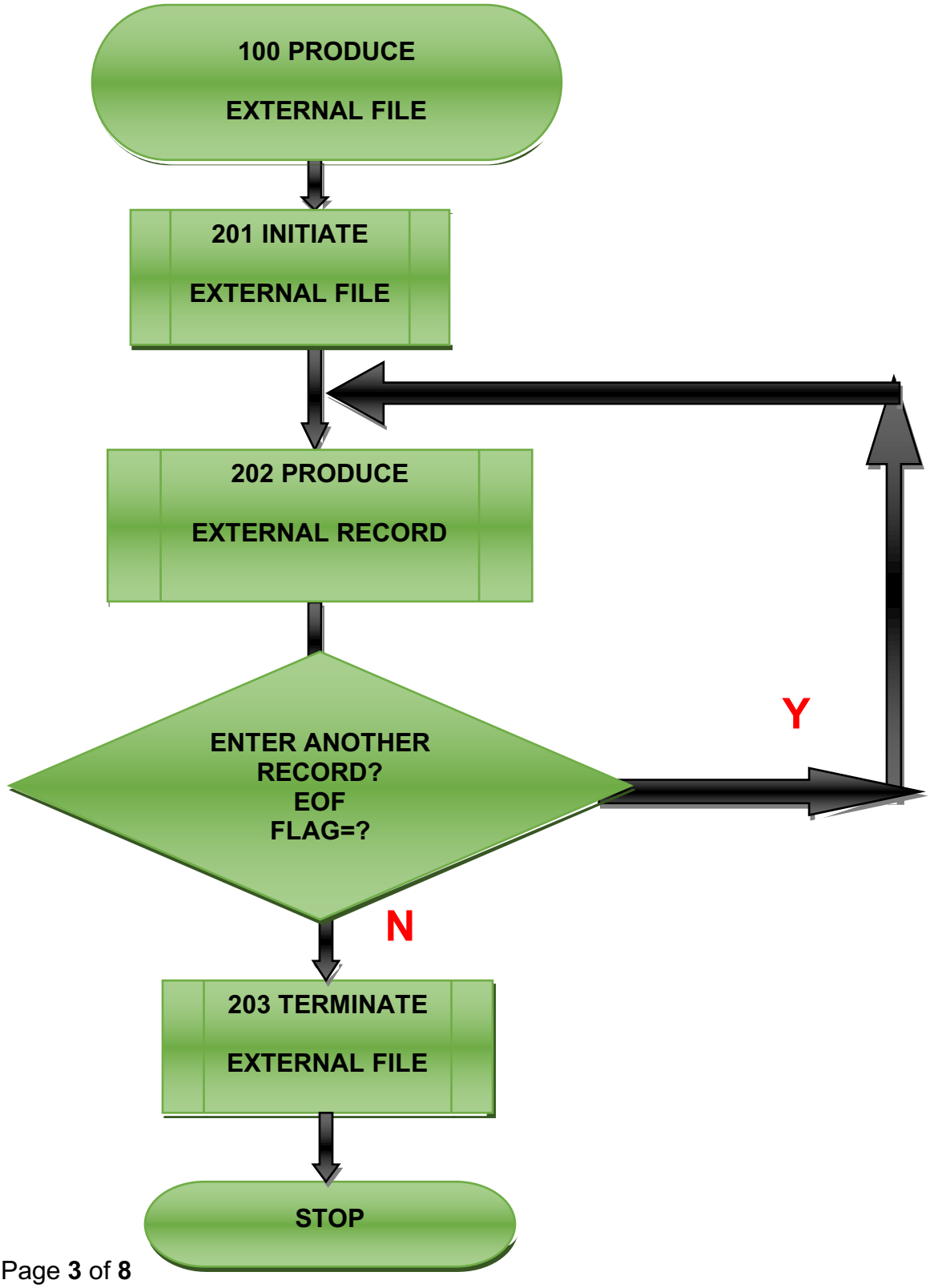
Flowcharts



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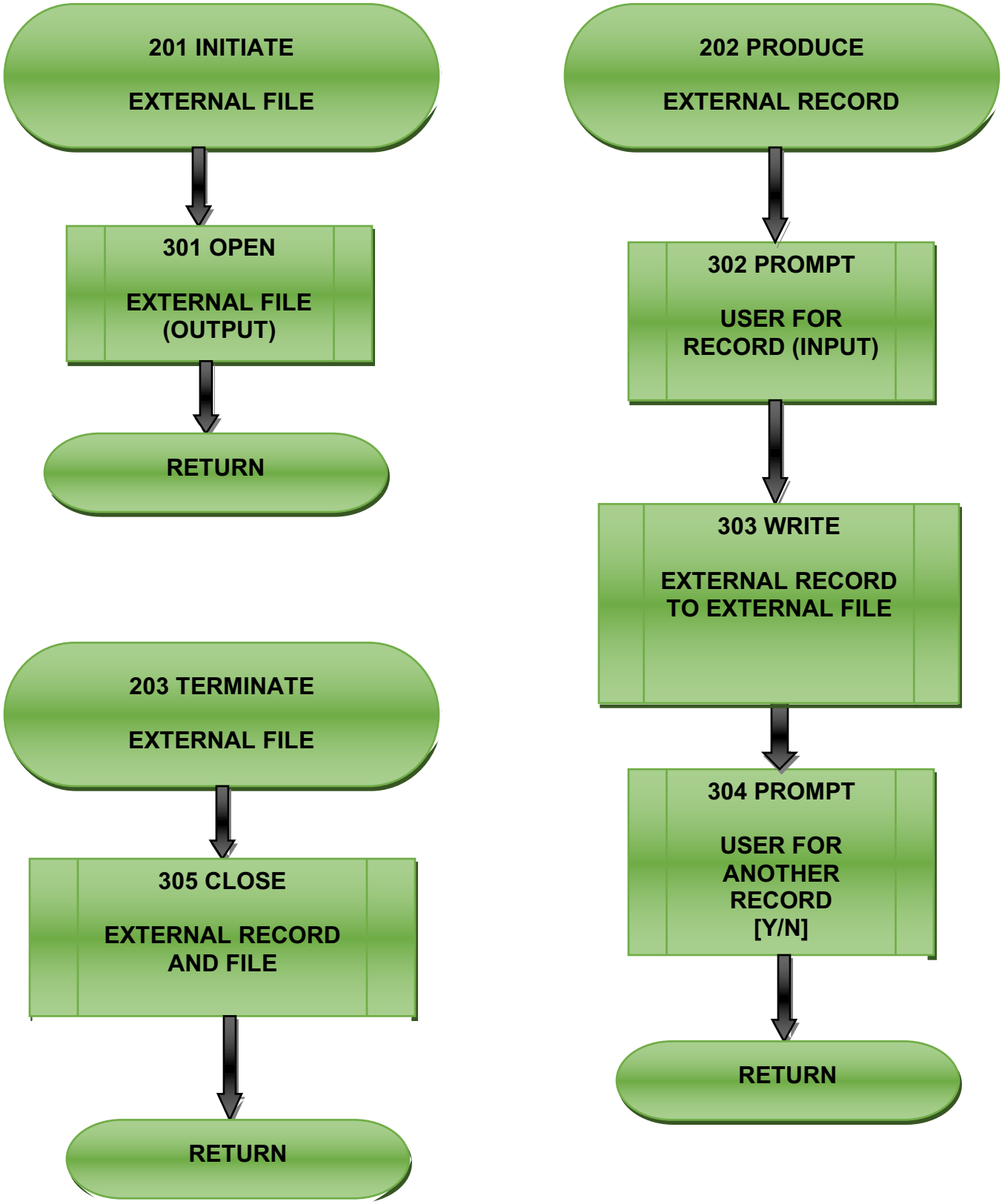

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Programming the COBOL Business Logic

```
      *division header
       IDENTIFICATION DIVISION.
      *program name (note – program name is a user supplied word)
       PROGRAM-ID. CST8283-PROJECT-1 AS "CST8283-PROJECT-1".
      *optional entries  (paragraph headers)
       AUTHOR. CHU-YU-YUN.
       DATE-WRITTEN. June 11th 2020.
       DATE-COMPILED. June 13th 2020.
       SECURITY.  Prof Mel Sanschagrin & Prof Jason Mombourquette.
      *************************************************************
      * Reference:                                                *
      * https://www.tutorialspoint.com/cobol/cobol_data_types.htm *
      *                                                           *
      *************************************************************
       ENVIRONMENT DIVISION.
       INPUT-OUTPUT SECTION.
       FILE-CONTROL.
           SELECT INVENT-FILE-OUT
              ASSIGN TO "./INVFILE.TXT"
              ORGANIZATION IS SEQUENTIAL.

      *Data Division: define the variables used in a program.
      *>> terms: Data Name, Level Number, Picture Clause, Value Clause
      *>> Data names:
      *- must be defined in the Data Division b4 using them in the
      *PROCEDURE DIVISION;
      *- must have a user-defined name;
      *- reserved words cannot be used;
      *- Data names give reference to the memory locations where actual
      *  data is stored;
      *- can be elementary or group type.
       DATA DIVISION.
       FILE SECTION.

       FD INVENT-FILE-OUT.
      *Record for file output
       01 INVENT-RECORD-OUT PIC 9(15).

       WORKING-STORAGE SECTION.
      *Stores user input for entering another inventory item
       01 EOF-FLAG PIC X(1) VALUE 'Y'.
      *01: Group of inventory item data.
       01 INVENT-INPUT.
      *05: Elementary items for inventory item.
           05 PART-NUMBER PIC 9(7).
           05 QUANTITY PIC 9(4).
           05 PRICE PIC 9(4).

       PROCEDURE DIVISION.
```

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```
*Main procedure
 100-PRODUCE-EXTERNAL-FILE.
     PERFORM 201-INITIATE-EXTERNAL-FILE.
     PERFORM 202-PRODUCE-EXTERNAL-RECORD
*Perform Until: the user enters 'N' for another item
       UNTIL EOF-FLAG = 'N' OR EOF-FLAG = 'n'.
     PERFORM 203-TERMINATE-EXTERNAL-FILE.
*STOP RUN: end the execution in this division.
     STOP RUN.

*Initiate file openining
 201-INITIATE-EXTERNAL-FILE.
     PERFORM 301-OPEN-EXTERNAL-FILE.

*Main program loop
 202-PRODUCE-EXTERNAL-RECORD.
     PERFORM 302-PROMPT-USER-FOR-RECORD.
     PERFORM 303-WRITE-RECORD-TO-FILE.
     PERFORM 304-PROMPT-USER-FOR-ANOTHER-RECORD.

*Close the output file.
 203-TERMINATE-EXTERNAL-FILE.
     305-CLOSE-EXTERNAL-RECORD-AND-FILE.

*Open the output file
 301-OPEN-EXTERNAL-FILE.
     OPEN OUTPUT INVENT-FILE-OUT.

*Promt queries
 302-PROMPT-USER-FOR-RECORD.
*display the output
     DISPLAY "Enter the part number: "       LINE 4 column 5.
*get data from the user
     ACCEPT PART-NUMBER                      LINE 5 COLUMN 10.
     DISPLAY "Enter the quantity: "          Line 6 COLUMN 5.
     ACCEPT QUANTITY                         Line 7 COLUMN 10.
     DISPLAY "Enter the UNIT price: "        Line 8 COLUMN 5.
     ACCEPT PRICE                            Line 9 COLUMN 10.

*Write data into the output file.
 303-WRITE-RECORD-TO-FILE.
*    copy data from user input data to file record.
     MOVE INVENT-INPUT TO INVENT-RECORD-OUT.
*    write the rocord to the file
     WRITE INVENT-RECORD-OUT.
*    Clear user input values
     INITIALIZE INVENT-INPUT.

*Promt another quries.
 304-PROMPT-USER-FOR-ANOTHER-RECORD.
     DISPLAY "Enter another part? [Y/N] "    Line 16 column 10.
     ACCEPT EOF-FLAG                         Line 17 column 10.
```

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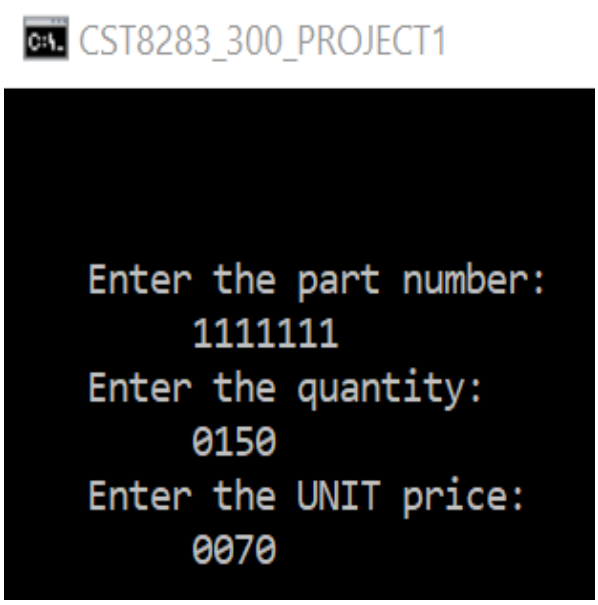
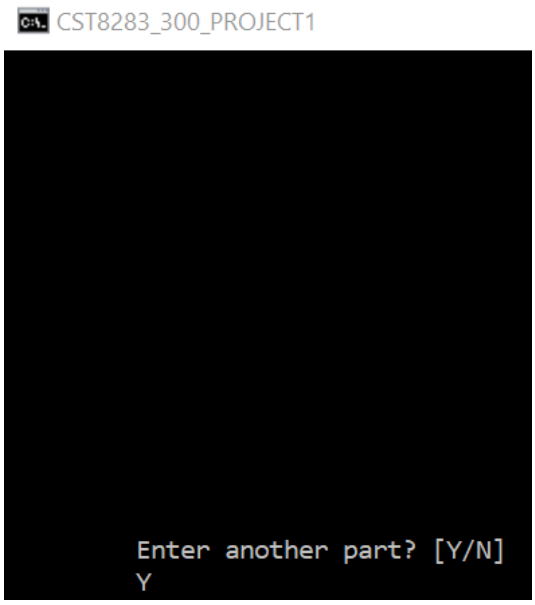
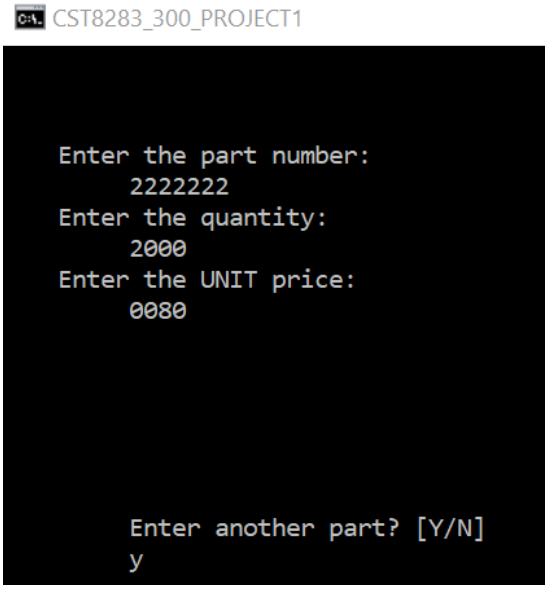
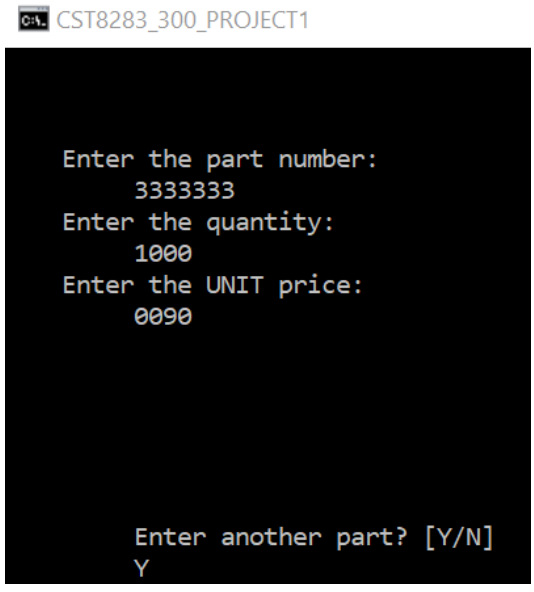
```
           DISPLAY " " WITH BLANK SCREEN.

       *Close the output file
        305-CLOSE-EXTERNAL-RECORD-AND-FILE.
           CLOSE INVENT-FILE-OUT.

       *Exit this COBOL program
        END PROGRAM CST8283-PROJECT-1.
```

Screenshots of the Console









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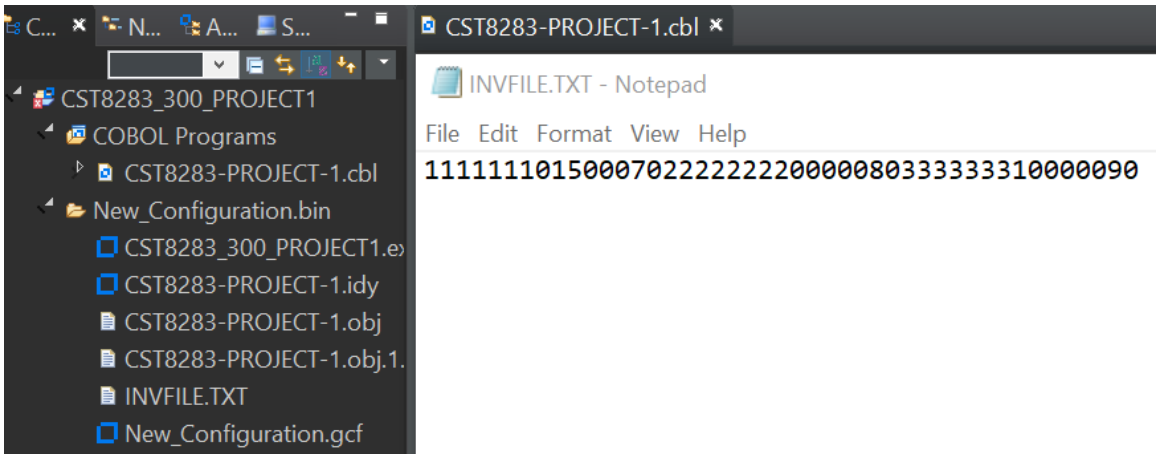

1111111015000702222222200000803333333100000090