Project 6 Report

The objectives of project 6 were pretty similar to project 5, instead now we create a whole new way to store our class data to make it a little easier to manipulate. To do this, we create an entire class called Course taken that allows us to create an array of objects to store all the information in the five parallel arrays at once. This class holds a get, set, and print function. This lets us change the list, get information from the list, and print the list out. Upon termination of the program, using a for loop all the information in the five parallel arrays gets transferred over to the Course taken class and is stored in an object array. This object array is then later stored in an out file called "checking.txt." using a get function to pass placeholder variables in order to print each individual class to the file. While this doesn't add any real functionality to the user, it makes it much easier for later manipulation of the data sets by the programmer. The final part of project 6 was to create a list of requirements for your degree and make the program able to read in that list and output it. Using the data stored in ISIS, I was able to put together a BSCERequirements.txt file. I added in the beginning of the program a welcome message that only goes away once the user inputs 'R' or 'r'; upon input, the program stores and lists the entire class requirements file in a string named 'requirements.' There are no known bugs in the program as it is written.

Input 1

R \mathbf{C} 4 Programming Foundations I Fall 2015 **CSCE 2004** Α 4 Digital Design Fall 2015 **CSCE 2014** D Sociology Fall 2015 **SOCI 2003** 3 Cultural Anthropology Fall 2015 **ANTH 2003** \mathbf{C} 3 a b cq

Output 1

Welcome to the University Degree Audit Program! Press R to list the requirements for a BS Degree in Computer Engineering

University Core English **ENGL** 1013 ENGL 1023 3 University Core US History or Government 3 HIST 2003 3 HIST

PLSC

Univesity Core

Mathematics

MATH

STAT

STAT

University

Core

Natural

Science

ANTH 1013 3 ANTH 1011L 1 ASTR 2003

3

ASTR 2001L 1

BIOL

1003 3

BIOL

1001L

BIOL

1543

3 BIOL

1541L

BIOL

1603 3

BIOL

1601L 1

BIOL

1613

3 BIOL

1611L

1

BIOL 2213

3

BIOL 2211L

BIOL

2443

3 BIOL

2441L 1

CHEM 1053

3

CHEM

1051L 1

CHEM

1073 3

CHEM

1071L 1 CHEM1103 3 CHEM 1101L 1 CHEM1123 3 CHEM 1121L CHEM1133 3 CHEM 1131L 1 CHEM1213 3 CHEM 1211L 1 CHEM1223 3 CHEM 1221L 1 **ENSC** 1003 3 **ENSC** 1001L 1 ENTO 1023 3 **ENTO** 1021L 1 GEOS 1113 3 **GEOS** 1111L 1 GEOS 1133 3 **GEOS** 1131L 1 PHYS1023

3 PHYS

1021L

1

PHYS

1034

4

PHYS

1044

4

PHYS

1054

4

PHYS

2013

3

PHYS

2011L

PHYS

2033

3

PHYS

2031L

1

PHYS

2054

4

PHYS

2074 4

University

Core

Fine

Arts

3

ARCH

1003

3

ARHS

1003

3

COMM

1003

3

DANC

1003

3

ENGL 2023

3

LARC

1003

3

MLIT

1003

3 MLIT

THTR

THTR

University

Core

Humanities

AAST

ARAB

ARAB

ARCH

CHIN

CLST

CLST

COMM

ENGL

FREN

FREN

GERM

GERM

GNST

GREK

 ${\sf GREK}$

GREK

HUMN

1124H

HUMN

2124H

ITAL

ITAL

JAPN

JAPN

LATN

LATN

MUSY

PHIL

PHIL

PHIL

PHIL

RUSS

RUSS

SPAN

SPAN

SWAH

SWAH

SWAH

WLIT

WLIT

University

Core

Social

Science

AGEC

AGEC

ANTH

ECON

ECON

ECON

GEOG

GEOG

HESC

HESC

HIST

HIST

HIST 2003

HIST

HUMN

1114H

HUMN

2114H

 PLSC

PLSC

PLSC

PSYC

RESM

RSOC

SOCI

SOCI

BSCE

Core

Computer Science/Computer Engineering

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

3613

3

CSCE

4561

1

CSCE

4114

4

CSCE

4963

3

CSCE

4213

3

BSCE

Core

CSCE

Electives

(may

take

1

STEM

elective)

12

CSCE

4013

3

CSCE

4043

3

CSCE

4123

3

CSCE

4133

3

CSCE

4233

3

CSCE

4253

3

CSCE

4263

3 CSCE

4323

3

CSCE

4333

3

CSCE

4353

3

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE 5063

CSCE

CSCE

CSCE

CSCE

CSCE

5253L

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

5363L

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE 5703

CSCE

CSCE

CSCE

3

BSCE

Core

STEM

Electives

(if

not

already

in

12

hours

of

CSCE

electives)

ELEG

3923

MATH

4363

3

MATH

4353

3

MATH

4253

3

MATH

4163

3

MEEG

4253

3

GEOS

4113

3

GEOS

4523

3

GEOS

4553

GEOS

4583

3 GEOS 4593

3

GEOS

4653

3

INEG

4343

3

INEG

4563

BIOL

4233H

3

BSCE

Core

Math/Science

34

MATH

2554

4

MATH

2564

4

MATH

2564C

4

MATH

2574

4

MATH

2574C

4

MATH

3083

3

MATH

2584

4

MATH

2584C

4

MATH

2603

3

CHEM

1103

3

CHEM

1213

3

CHEM

1123

3

PHYS

2054

4 PHYS

2074

4

ASTR

2003

3 BIOL

2001L

1

BIOL

1543

```
BIOL
1541L
1
ENSC
1003
3
ENSC
1001L
1
GEOL
1113
3
GEOL
1111L
1
BIOL
1603
BIOL
1601L
1
BIOL
2213
3
BIOL
2211L
1
CHEM
1133
3
CHEM
1131L
1
PHYS
3613
3
BSCE
Core
Communication
ENGL
1013
ENGL \\
1023
3
COMM
1313
3
BSCE
Core
U.S.
History/Government
HIST
2003
3
```

HIST

3

PLSC

2003

3

PLSC

2003H

3

BSCE

Core

Fine

Arts/Humanities

6

ARCH

1003

3

ARHS

1003

3

COMM

1003

3

DANC

1003

3

ENGL

2023

3

LARC

1003

3

MLIT

1003

3

MLIT

1013

3

THTR

1003

3

THTR

1013

PHIL

3013

3

BSCE

Core

Social

Science

9

AGEC

1103

3

AGEC

2103

3 ANTH

ECON

ECON

ECON

GEOG

GEOG

HESC

HESC

HIST

HIST

HIST

HIST

HUMN

1114H

HUMN

2114H

PLSC

PLSC

PLSC

 PSYC

RESM

RSOC

SOCI

2033

BSCE

Core

General

Electives

!ANTH

0003

3

!PHSC

0003

!ENGL

0003

3

!MATH

0003

3

!CIED

0003

3

!MATH

1203

3

!MATH

1213

3

!MATH

1285

5

Engineering

Core

Other

Engineering

Courses

GNEG

1111 1

GNEG

1121

1 STAT

3013

3

INEG

2313 3

ELEG

How would you like to input your course data? [A] Read in from the default file (courses.txt) [B] Read in from another specified file [C] Manual input Enter how many classes you're taking/have taken: Class name:
Term of enrollment:
Course number:
Grade:
Hours (1-5):
Class name:
Term of enrollment:
Course number:
Grade:
Hours (1-5):
Class name:
Term of enrollment:
Course number:
Grade:
Hours (1-5):
Class name:
Term of enrollment:
Course number:
Grade:
Hours (1-5):
Welcome to the GPA and Course storage program menu. Now that you've entered your class information, please enter the character next to the choice you wish to pick.

A. Compute the GPA for all courses

- B. List all courses
- C. Compute the total credit hours of courses with grade D
- D. Compute the GPA for a particular semester
 E. Add another course to the course list
 F. Remove a course from the current list

- Q. Quit the program

Welcome to the GPA and Course storage program menu.

Now that you've entered your class information, please enter the character next to the choice you wish to pick.

- A. Compute the GPA for all courses
- B. List all courses
- C. Compute the total credit hours of courses with grade D
- D. Compute the GPA for a particular semester
- E. Add another course to the course list
- F. Remove a course from the current list
- Q. Quit the program

You have taken 4 classes.

Classes: Programming Founations I Digital Design Sociology Cultural Anthropology

Terms: Fall 2015 Fall 2015 Fall 2015 Fall 2015

Course Numbers: CSCE 2004 CSCE 2014 SOCI 2003 SOCI 2003

Grades: A D B C

Hours: 4 4 3 3

Welcome to the GPA and Course storage program menu.

Now that you've entered your class information, please enter the character next to the choice you wish to pick.

- A. Compute the GPA for all courses
- B. List all courses
- C. Compute the total credit hours of courses with grade D
- D. Compute the GPA for a particular semester
- E. Add another course to the course list
- F. Remove a course from the current list
- Q. Quit the program

Total hours (grade D): 4

Welcome to the GPA and Course storage program menu.

Now that you've entered your class information, please enter the character next to the choice you wish to pick.

- A. Compute the GPA for all courses
- B. List all courses
- C. Compute the total credit hours of courses with grade D
- D. Compute the GPA for a particular semester
- E. Add another course to the course list
- F. Remove a course from the current list
- Q. Quit the program

Successfully outputted course_taken class data to checking.txt!

Successfully outputted the five parallel arrays to courses.txt!

Input 2 (using list from 1)

R A a b f 0 y b q

Output 2

Welcome to the University Degree Audit Program! Press R to list the requirements for a BS Degree in Computer Engineering

University Core English 6 ENGL1013 3 **ENGL** 1023 University Core US History Government 3 HIST 2003 3 HIST 2013 **PLSC** 2003 Univesity Core Mathematics 3 MATH1023 MATH1213 3

MATH 1313

MATH 2033 3

MATH

2043

3

MATH

2053

3

MATH

2183

3

MATH

2213

3

MATH

2223

3

MATH

2554

4

MATH

2564

4

MATH

2574

4

MATH

2603

3

STAT

2023

3

STAT

2303

3

University

Core

Natural

Science

8

ANTH

1013

3 ANTH

1011L

1

ASTR

2003

3

ASTR

2001L

1

BIOL

1003

3 BIOL

1001L

1

BIOL

```
3
BIOL
1541L
1
BIOL
1603
3
BIOL
1601L
1
BIOL
1613
3
BIOL
1611L
BIOL
2213
BIOL
2211L
1
BIOL
2443
3
BIOL
2441L
1
CHEM
1053
3
CHEM
1051L
1
CHEM
1073
3
CHEM
1071L
1
CHEM
1103
3
CHEM
1101L
1
CHEM
1123
3
CHEM
1121L
1
CHEM
1133
3
CHEM
1131L
1
```

CHEM

1213

3

CHEM

1211L

1

CHEM

1223

3

CHEM

1221L

1

ENSC

1003

3

ENSC

1001L

ENTO

1023

3

ENTO

1021L

GEOS

1113

3

GEOS

1111L

1

GEOS

1133

3

GEOS 1131L

PHYS

1023

3

PHYS1021L

PHYS

1034

4

PHYS

1044

4

PHYS 1054

4

PHYS

2013

3

PHYS

2011L

1

PHYS

3

PHYS

2031L

1

PHYS

2054

4

PHYS

2074

4

University

Core

Fine

Arts

3

ARCH

1003

3

ARHS

1003

3

COMM

1003

3

DANC

1003

3

ENGL

2023

3

LARC

1003

3

MLIT

1003

3

MLIT

1013

3

THTR

1003

THTR

1013

3

University Core

Humanities

3

AAST

2023

3

ARAB

2013

3

ARAB

ARCH

CHIN

CLST

CLST

COMM

ENGL

FREN

FREN

GERM

GERM

GNST

GREK

GREK

GREK

HUMN

1124H

HUMN

2124H

ITAL

ITAL

JAPN

JAPN

LATN

LATN

MUSY

PHIL

PHIL

PHIL

 PHIL

RUSS

RUSS

SPAN

SPAN

SWAH

SWAH

SWAH

WLIT

WLIT

University

Core

Social

Science

AGEC

AGEC

ANTH

ECON

ECON

ECON

GEOG

GEOG

HESC

HESC

HIST

HIST

HIST

HIST

HUMN

1114H

HUMN

2114H

PLSC

PLSC

PLSC

PSYC

RESM

2853

3

RSOC

2603

3

SOCI

2013

3

SOCI

2033

3

BSCE

Core

Computer

Science/Computer

Engineering

39

CSCE

2004

4

CSCE

2114

4

CSCE

2014

4

CSCE

2214

4

CSCE

3193

3 CSCE

3953

393

CSCE

3513

3

CSCE

3613

3

CSCE

4561

1

CSCE

4114

4

CSCE

4963

3

CSCE

4213

3

BSCE

Core

CSCE

Electives

(may take

STEM

elective)

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

5253L

CSCE

CSCE

CSCE

CSCE

CSCE

CSCE

5363L

3

CSCE

5433

3

CSCE

5533

3

CSCE

5543

3

CSCE

5633

3

CSCE

5643

3

CSCE

5653

3

CSCE

5663

3

CSCE

5683

3

CSCE

5703

3 CSCE

5823

3

CSCE

5843

3

CSCE

5983

3

BSCE

Core

STEM

Electives

(if

not

already

in

12

hours

of

CSCE

electives)

3

ELEG

3923

3 MATH

MATH

MATH

MATH

MEEG

GEOS

GEOS

GEOS

GEOS

GEOS

GEOS

INEG

INEG

BIOL

4233H

BSCE

Core Math/Science

MATH

MATH

MATH

2564C

MATH

MATH

2574C

4

MATH

3083

3

MATH

2584

4

MATH

2584C

4

MATH

2603

3

CHEM1103

3

CHEM

1213

3

CHEM

1123

3

PHYS

2054

4

PHYS

2074

4

ASTR

2003

3

BIOL

2001L

1

BIOL

1543

3

BIOL

1541L

ENSC

1003

3 ENSC

1001L

1

GEOL

1113

3

 GEOL

1111L 1

BIOL

1603

3 BIOL

1601L

```
1
BIOL
2213
3
BIOL
2211L
1
CHEM
1133
3
CHEM
1131L
PHYS
3613
3
BSCE
Core
Communication
ENGL \\
1013
3
ENGL
1023
3
COMM
1313
3
BSCE
Core
U.S.
History/Government
3
HIST
2003
3
HIST
2013
3
PLSC
2003
PLSC
2003H
3
BSCE
Core
Fine
Arts/Humanities
6
ARCH
1003
3
ARHS
1003
3
COMM
```

DANC

ENGL

LARC

MLIT

MLIT

THTR

THTR

PHIL 3013

BSCE

Core

Social

Science

AGEC

AGEC

ANTH

ECON

ECON

ECON

GEOG

GEOG

HESC

HESC

2413

3

HIST

1113

3

HIST

1123

3

HIST

2003

3

HIST

2013

3

HUMN

1114H

4

HUMN

2114H

4

PLSC

2003

3

PLSC

2013

3

PLSC

2203

3 PSYC

2003

3

RESM

2853

3

RSOC

2603

3

SOCI

2013

3

SOCI

2033

3

BSCE

Core General

Electives

6

!ANTH

0003

3

!PHSC

0003

3

!ENGL

!MATH 0003 3 !CIED 0003 !MATH 1203 3 !MATH 1213 !MATH 1285 Engineering Core Other Engineering Courses **GNEG** 1111 **GNEG** 1121 **STAT** 3013 **INEG** 2313 3 **ELEG** 3933

How would you like to input your course data?

- [A] Read in from the default file (courses.txt)
- [B] Read in from another specified file
- [C] Manual input

Welcome to the GPA and Course storage program menu.

Now that you've entered your class information, please enter the character next to the choice you wish to pick.

- A. Compute the GPA for all courses
- B. List all courses
- C. Compute the total credit hours of courses with grade D
- D. Compute the GPA for a particular semester
- E. Add another course to the course list
- F. Remove a course from the current list
- Q. Quit the program

Welcome to the GPA and Course storage program menu.

Now that you've entered your class information, please enter the character next to the choice you wish to pick.

- A. Compute the GPA for all courses
- B. List all courses
- C. Compute the total credit hours of courses with grade D
- D. Compute the GPA for a particular semester
- E. Add another course to the course list
- F. Remove a course from the current list
- Q. Quit the program

You have taken 4 classes.

Classes: Programming Foundations I Digital Design Sociology Cultural Anthropology

Terms: Fall 2015 Fall 2015 Fall 2015 Fall 2015

Course Numbers: CSCE 2004 CSCE 2014 SOCI 2003 ANTH 2003

Grades: A D B C

Hours: 4 4 3 3

Welcome to the GPA and Course storage program menu.

Now that you've entered your class information, please enter the character next to the choice you wish to pick.

- A. Compute the GPA for all courses
- B. List all courses
- C. Compute the total credit hours of courses with grade D
- D. Compute the GPA for a particular semester
- E. Add another course to the course list
- F. Remove a course from the current list
- Q. Quit the program

Enter the index of the course you'd like to remove

- [0] Programming Foundations I
- [1] Digital Design
- [2] Sociology
- [3] Cultural Anthropology

Is this the course you'd like to remove? Name: Programming Foundations I

Semester: Fall 2015

Course Number: CSCE 2004

Grade: A Hours: 4

y/n

Course deleted.

Welcome to the GPA and Course storage program menu.

Now that you've entered your class information, please enter the character next to the choice you wish to pick.

- A. Compute the GPA for all courses
- B. List all courses

- C. Compute the total credit hours of courses with grade D
- D. Compute the GPA for a particular semester
- E. Add another course to the course list
- F. Remove a course from the current list
- Q. Quit the program

You have taken 3 classes.

Classes: Digital Design Sociology Cultural Anthropology

Terms: Fall 2015 Fall 2015 Fall 2015

Course Numbers: CSCE 2014 SOCI 2003 ANTH 2003

Grades: DBC

Hours: 4 3 3

Welcome to the GPA and Course storage program menu.

Now that you've entered your class information, please enter the character next to the choice you wish to pick.

- A. Compute the GPA for all courses
- B. List all courses
- C. Compute the total credit hours of courses with grade D
- D. Compute the GPA for a particular semester
- E. Add another course to the course list
- F. Remove a course from the current list
- Q. Quit the program

Successfully outputted course_taken class data to checking.txt!

Successfully outputted the five parallel arrays to courses.txt!