Hunegnaw Chanie

Prof. Alexander

CMSC 204, DESIGN#4

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Pseudocode

1. courseBDElement class this implements comparable class

private fields of the class

Private string course ID;

Private int CRN;

Private int number of credits;

Private string room number;

Private string instructor name

Private string hash code

create courseBDElement constructor

courseDBElement() default

courseDBElement(ID string, CRN int, credit int, roomNo string, name string)

getter and setter for those private fields

getCRN() crn reference object to get the CRN number

hashCode() integer value for the hash

setCRN() setting the CRN number

create compare To method that is compareTo(courseDBElement)

check whether the compare To method is greater than zero, less than zero, or equal to zero.

toString method to return the string of the result.

1. courseDBStructure class implements CourseDBStructureInterface

implement of has table with bucket

create an linked list of courseDBelement

constructors

courseDBStructure()

add course element method to add create the hash table of linked list course element object

and add that element

get course element method

get table size method to get the size of the hash table

create LinkedList method. This is used when the linked list is not exist

Check whether the it exists or not. And add to the hash table

1. courseDBmanager class implements CourseDBManagerInterface

allow to read course from file,enter data, print output

constructor

courseDBmanager ()

public void add method for ID, CRN, credit, room number, and instructor name.

get method

creates objects of the course element class and the course structure object.

public void read File(file input) or readFile(file) used to read from file or from text field.

Use the scanner object to read the file from hash.

public coursed Element get(int crn)

public Array List<string> show All to return all the array list elements in the form of string.

1. exception class IOException it throws an exception when the user selects input file that is not exist, attempting retrieve nonsexist data of element.
2. GUI Driver
3. Testing CourseDBManager STUDENT Test.