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Honors 1260 – Spring 2020

Credit Card Manager Design Document

Problem: Spring 2020 Honors 1260 Project 1: Credit Card Manager

### List of Inputs, Outputs, and Processing Required

INPUTS

* Inputs will be menu driven using JOptionPane
* Allow the user to enter credit card information
  + Card holder’s name
  + Credit card number
  + Expiration date

OUTPUTS

* A report summerizing the information entered about a credit card

PROCESSING

* Store the information input from the credit card in separate attributes
* Determine if the card number is valid
* Determine if the card is expired
* Determine the credit card type (Visa, Mastercard, etc.)
* Generate a report summarizing the credit card

### Identification of Classes and Their Responsibilities

**Class name:** **CreditCardManagerDriver**

Responsibilities:

* Use JOptionPane to makes I/O
* Input the card holder’s name
* Input the card number
* Input the card expiration date
* Outputting a report of the card

**Class name:** **CreditCard**

Responsibilities:

* knowing the card holder’s name
* knowing the card number
* knowing the card expiration data
* determine if the entered card number is valid
* determine if the card if valid
* generate a report of the credit card

### UML Class Diagram

This diagram may omit common methods that essentially all classes have such as constructors and getters/setters, but they must be present in the code.

### 

### Algorithms

Class: Vehicle

Operation: getDistance ( )

START

return speedMPH \* hoursTraveled

END

### Test Cases

|  |  |  |  |
| --- | --- | --- | --- |
| **Card Holder** | **Card Number** | **Expirtion Date** | **Expected Output** |
| Amex | 374245455400126 | 05/2023 | Success |
| Amex | 378282246310005 | 05/2023 | Invalid Card Number |
| Discover | 60115564485789458 | 12/2023 | Success |
| Discover | 6011000991300009 | 12/2023 | Success |
| Mastercard | 5425233430109903 | 04/2023 | Success |
| Mastercard | 5425233430109903 | 12/2004 | Invalid Expiration Date |
| Visa | 4917484589897107 | 01/2023 | Failure |
| Cencosud | 6034932528973614 | 06/2020 | Success |