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| GENERAL CHARACTERISTICS | |
| Intent | Allow the Customer to pre-pay with credit card at the pump. |
| Scope | Payment Method - |
| Primary Actor | Customer |
| Secondary Actors | Clerk |
| Preconditions | The display (LCD Screen) is currently asking the user for payment method |
| Trigger | The customer has decided which payment method to use. |
| Success Post Condition | The customer's credit card has been accepted , and the display asks user to select fuel grade. |
| Failed Post Condition | The customer's credit card has been denied |

Sunny Day Scenario

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| Step | Action |
| Start | This Scenario begins when the display is showing payment options, and the customer has decided which payment method to use |
| 1 | The customer selects Pay With Credit |
| 2 | The display prompts the customer to insert or tap credit card on the reader. |
| 3 | The user inserts/taps credit card |
| 4 | The display instructs the customer to enter their zip code using the keypad. |
| 5 | The credit card reader reads the card and makes a secure connection with the bank. |
| 6 | The credit card/zip card is authorized with bank, and the display instructs the user to select fuel grade. |

Rainy Day Scenario - Unauthorized Credit Card

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| Step | Action |
| Start | This Scenario begins when the display is showing payment options, and the customer has decided which payment method to use |
| 1 | The customer selects Pay With Credit |
| 2 | The display prompts the customer to insert or tap credit card on the reader. |
| 3 | The user inserts/taps credit card |
| 4 | The display instructs the customer to enter their zip code using the keypad. |
| 5 | The credit card reader reads the card and makes a secure connection with the bank. |
| 6 | The credit card/zip card is denied for payment. |
| 7 | The Clerk is alerted to the situation, and resets the pump back to the starting point using the in-store Pump Monitoring and Control station. |

**Functional Requirements:**

FR-1 The customer **shall** be able to interact with the gas pump using an LCD Display

FR-2 The customer **shall** be able to provide input using a keypad with the following buttons:

1. Digits 0-9
2. Cancel
3. Enter

FR-3 The customer **shall** be able to insert or tap their credit card.

FR-4 The display **shall** provide prompts to the user to support interactions with the credit card reader, such as “Insert or Tap credit card”, “Enter Zip Code”, “Credit Card Authorized”, “Credit Card Denied”.

FR-5 The displayed prompts **shall** be in the English language.

FR-7 The credit card reader **shall** have a closed, encrypted WiFi connection with the in-store Pump Monitoring and Control station.

FR-8 The credit card reader **shall** support an encrypted internet connection with the credit card bank via WiFi.

**Performance Requirements:**

PR-1 Encryption **shall** be done with a minimum 256 bit key.

PR-2 The LCD Display **shall** be at least 8x10 inches, with HD resolution.

PR-3 Only banks that implement the Electronic Banking Internet Communications Standard (EBICS) communications protocol **shall** be supported.

A diagram of a computer

Description automatically generated