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| **Noun** | **Classification** | **Reasoning** |
| Vending Machine | Control | Represents the main system entity. |
| BankCard | Entity | Represents the card used by customers for transactions. |
| Transaction | Entity | Represents the financial transaction occurring during a purchase. |
| Maintenance Operator | Boundary/Control | Represents an external actor interacting with the vending machine for maintenance tasks. |
| Service Operator | Boundary/Control | Represents an external actor conducting repairs and servicing of the vending machine. |
| Items | Entity | Represents the items available for purchase in the vending machine. |
| Configuration File | Entity | Represents the file storing product information and machine settings. |
| Card Reader | Control | Represents the interface for reading vending cards. |
| Service Company | Control | Represents the company providing maintenance and support services. |
| Water Dispenser | Entity | Represents the component dispensing water. |
| Food Dispenser | Entity | Represents the component dispensing food items. |
| Water Container | Entity | Represents the container holding water for dispensing. |
| Access Card | Entity | Represents the card used by customers, maintenance and service operators for accessing the vending machine. |
| Inventory | Entity | Represents the stock of items available in the vending machine. |
| SIM Card | Entity | Represents the card providing mobile network access for the vending machine. |
| Payment Server | Entity | Represents the external server handling payment transactions. |
| User Interface | Boundary | Represents the interface for user interaction with the vending machine. |
| Payment Gateway | Subsystem | Represents the system handling payment transactions. |
| Bank Card | Entity | Represents the card used by customers, to topup account |
| Refrigeration Unit | Control | Represents the cooling system used to maintain food freshness. |
| Customer | Entity | Represents the person making the purchase. |
| Operator | Entity | Represents personnel responsible for operating and maintaining the vending machine. |

**Reason for keeping candidate classes:**

Vending Machine: Holds inside the fundamental substances representing hardware, software and configuration lifeline.

Items: Represents items which may be available to purchase and with attributes that allow defining their characteristics.

Maintenance Operator and Service Operator: Show internal agents acting as contractors and technicians on repair and service tasks.

Configuration File: This appears in the program as the permanent storage space for the items and machine settings.

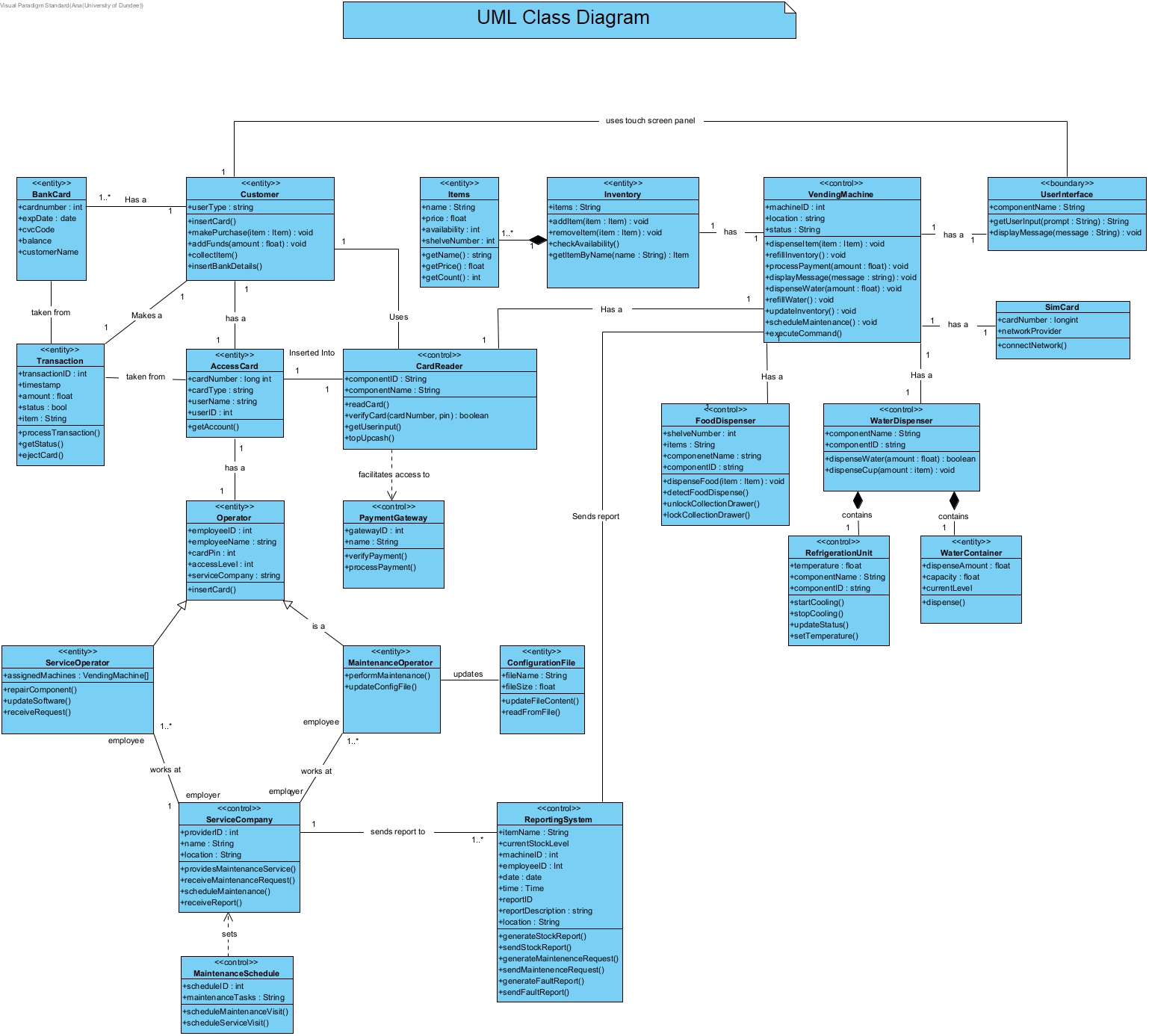
**Consideration of Class Stereotypes:**

Boundary Classes: Maintenance Operator, Service Operator, User Interface,

Entity Classes: BankCard, Transaction, Items, Configuration File, Water Dispenser, Food Dispenser, Water Container, Access Card, Inventory, SIM Card, Payment Server, Bank Card, Customer, Operator

Control Class: Vending Machine, Card Reader, Service Company, Refrigeration Unit,

# UML Class Diagram

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