PROJECT REPORT _(includes: executive summary, activity diagram, erd diagram)

Company Name: DKRV Group
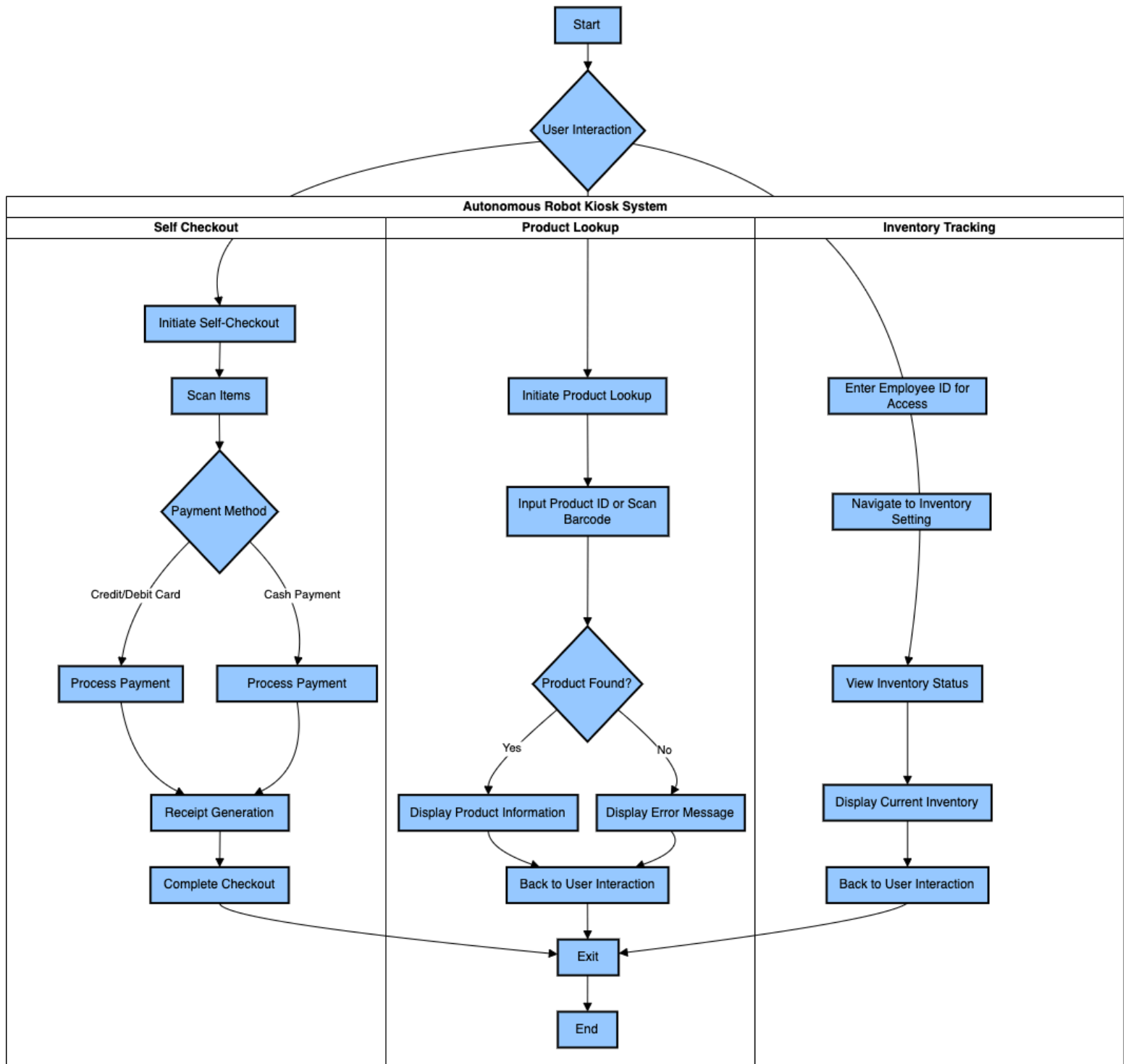**Team Name:** Section 2 Team 4
Team Members:

- Tai Dinh
- AJ Kilmer
- Miz Rahman
- My-Linh Vu

EXECUTIVE SUMMARY

Our team will develop an autonomous kiosk robot system, which is a self-service assistant that can greatly improve the overall retail experience by providing self-checkout, inventory management, and product search. This robotic system will stroll around the store autonomously, allowing customers to interact with it, in which they can search for the location of a certain product or check out their purchases. When there is no customer interaction with the robot, it will resume inventory management.

━--DIAGRAMS BELOW━---

ACTIVITY DIAGRAM

Start

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User Interaction

Autonomous Robot Kiosk System

Self Checkout	Product Lookup	Inventory Tracking
Initiate Self-Checkout	Initiate Product Lookup	Enter Employee ID for Access
Scan Items	Input Product ID or Scan Barcode	Navigate to Inventory Setting
Payment Method	Product Found?	View Inventory Status
Credit/Debit Card → Process Payment Cash Payment → Process Payment	Yes → Display Product Information No → Display Error Message	Display Current Inventory
Receipt Generation	Back to User Interaction	Back to User Interaction
Complete Checkout		

Exit

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End

ERD Diagram

CUSTOMER

PK	CustomerID
	Name
	Email
	PhoneNum
	Address

creates

TRANSACTION

PK	TransactionID
FK	CustomerID
	TransactionDate
	TotalAmount

contains

PRODUCT

PK	ProductID
	Name
	Price
	Description
	StockQuantity
	AddedDate

includes

tracked_by

INVENTORY

PK	InventoryID
FK	ProductID
	CurrentStockAmt
	LastRestocked

ORDER_ITEM

PK	OrderItemID
FK	TransactionID
FK	ProductID
	Quantity
	ItemTotal