

Field	Description
ID	UP01
Name	Permit Purchase
Short Description	University customers (student, teacher, etc.) can purchase a permit to park in the University parking lot through the system, and the parking office can process this purchase/add to the database to register the validity of the permit.
Goal	University customer can park in the parking lot without being issued a violation
Preconditions	<ul style="list-style-type: none"> • Customer is already registered in the system • Customer has a vehicle to register • Customer has sufficient funds to handle the payment • University has bandwidth to issue another permit
Success End Condition	<ul style="list-style-type: none"> • Customer is registered in the system with the car information and valid/active permit • Duration of validity for the permit is logged • Parking Office receives sufficient payment for the permit
Fail End Condition	<ul style="list-style-type: none"> • Customer is not charged • Customer is not issued a permit • Customer is notified why
Stakeholder	Primary: Customer Secondary: Parking Office
Trigger	Customer selects "Purchase Permit" option in the system
Normal Flow	<ol style="list-style-type: none"> 1. Customer triggers the option to purchase permit 2. Parking System provides permit types 3. Customer selects permit they wish to purchase 4. Parking System gathers information from the user, and vehicle information, along with the customer's preferred permit 5. Parking system validates vehicle information (registration, year, type, etc.) and validates the user's university affiliation (only issues to customers associated with the university)

	<ol style="list-style-type: none"> 6. Customer validates information in the parking system, and selects the “Purchase” option for the permit 7. Parking System processes purchase through contacting payment provider, processes if was successful, and logs all information to the associated permit ID within the system, returns to customer 8. The customer receives a receipt and permit.
Alternative Flow	<ul style="list-style-type: none"> ● <u>Permit not available</u>: Possible capacity has been reached for a permit type in the system, or it’s not being issued currently (Occur during #3) ● <u>Customer Not Valid</u>: If the customer isn’t associated with the university, they can’t purchase a permit. This could allow avenues for “Guest Permits” instead (Occur during #5) ● <u>Register Vehicle</u>: If the vehicle isn’t registered in the system yet (Occur during #5) ● <u>Pre-existing permit</u>: If the customer already has an existing, valid, and active permit (Occur during #5) ● <u>Insufficient payment</u>: The contact with the payment provider was unsuccessful whether due to connection, bank is not supported, or insufficient funds for the customer (Occur during #7) ● <u>Network Connection Issues</u>: The system relies on network connection, if it’s down it can’t process any permits and must have a means of communicating that for the customer (Occurs during #1) ● <u>Email/notification updates</u>: When a customer purchases a permit, email notification should be sent, or if permits are unavailable, provide a way for customers to be notified via email when available. (Occurs during #1)
Includes	UP02: Register Vehicle UP05: Give Discount (extends from parking office)
Frequency of Use	Most often at the start of the school semester (high traffic), throughout the year it’s just daily use based on needs

Constraints and Special Requirements	<ul style="list-style-type: none"> • The discount qualifications for compact cars • Idempotency for charges to the customer
Assumptions	<ul style="list-style-type: none"> • One-To-One with permit and vehicle • Customer has a single vehicle to register
Notes and Issues	<ul style="list-style-type: none"> • Consider guest permits • Possibility for a payment plan for paying off the permit, since they're usually expensive • Consider scalability for when a new parking lot opens <ul style="list-style-type: none"> ○ Would there be specific permits per parking lot? Or some combination permits?