

Parks Project

SPRINT1 REVIEW

An Upgraded Scope

547G Proposal



The Basics

- ❖ Sprint 1 Requires as few as 5 Working Endpoints, and as many as 10 with Auth.
 - Team5 has delivered 33 Tables x 5(Get, Update, Delete, Post, Update by User) + a few.... almost 160 working endpoints in full form.
 - We have added a few more for specialty purposes (specific carts, parks, etc which are not ID, or UserID driven).
- ❖ We have added an Enterprise Services Layer for Security.
 - It logs on the backside security parameters.
- ❖ We have built an Enterprise Capable Cart with
 - CarMaster->CartTransactions->CartItems Model
 - We can sell anything in this cart by Site, By Park, Global Items, or State Items.
- ❖ Our User Interface supports Web Clients, App Clients, CLI Clients, and eventually by final Mobile Clients.
- ❖ Our UI is mostly done. We have another few days of requirements on the backend in the backlog but all of these are non rubric items.

AGENDA

01

BASE
REQUIREMENTS
@CAPGEMENI

02

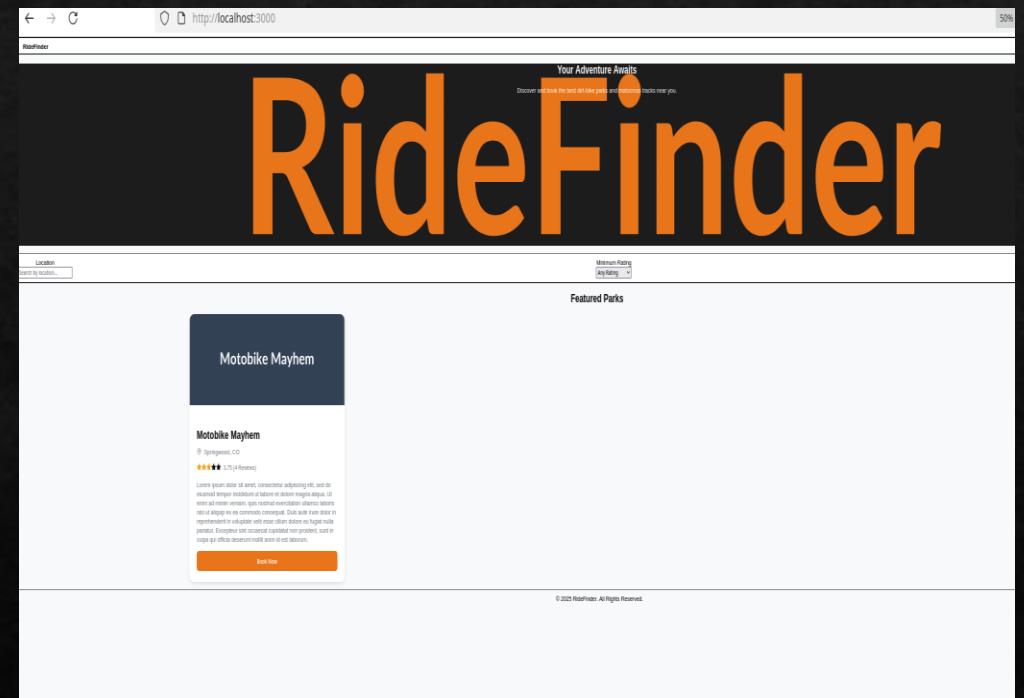
UPGRADED
REQUIREMENTS
@GREENVILLE

03

CODE ANALYSIS
AND
CONTRIBUTORS

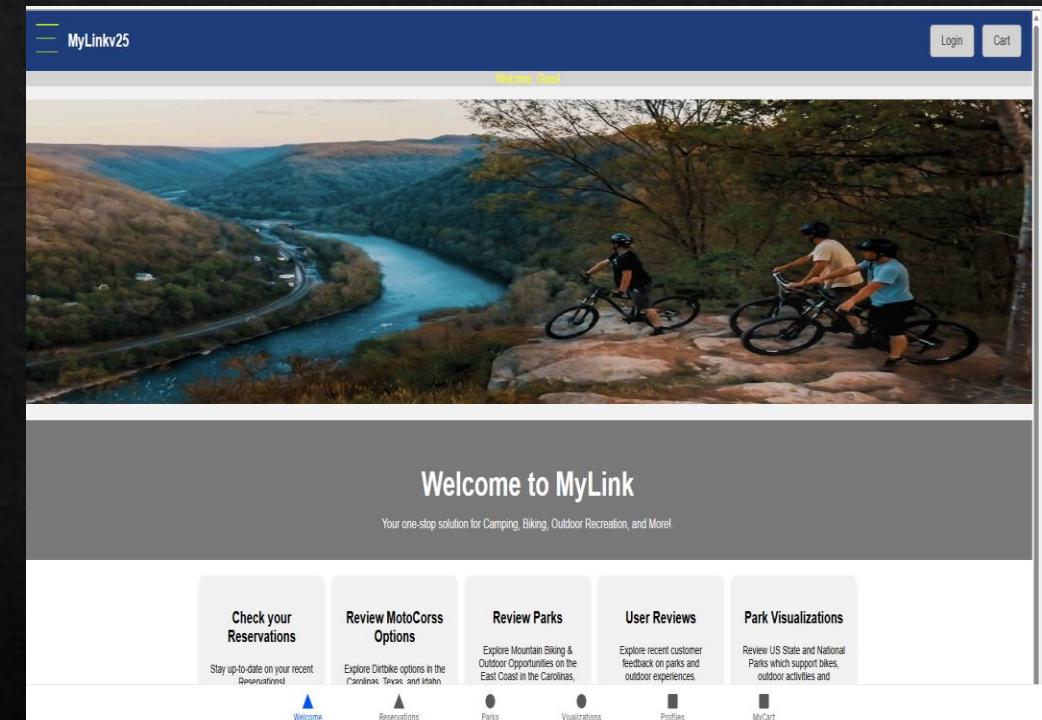
01 - CG - SOWBASE - 547BASE

- ❖ Dirtbike Project
- ❖ Requirements to Book Parks for A Day or Multiple Days
- ❖ Requirements for Ticketing, Carts, and Payments
- ❖ Requires some seeding of Proposed Parks (South Carolina, Other)
- ❖ Requires the Integration with a Front-End Provided By Capgemeni (L. Elwood).
- ❖ Similar to Process for Movies Last Year in Fall 2024.



02 - GA-SOWUPG - 547PRO

- ❖ Scope of Sales Improved to Anything that can occur in a State or National Park (Camping, Rafting, Frisbee, Camp Movies, Camp Store) - CG Requirements Subset.
- ❖ Improved Cart with Sophisticated Productization (Rubric Products(CGTickets), Park Only Products (Class P), Global Products for All Parks (Class G), and State Products for State Parks(Class S) – CG Requirements Subset.
- ❖ Added GIS Overlays to the UI (Driving Directions, and Google Maps).
- ❖ Added Transaction Flow Through to ERP Accounting via Daily, Weekly, Monthly Batches.
- ❖ Added Sophisticated Multiproduct Billing, and Refunds with Transaction Processing.
- ❖ Seeking to Offer Full Mobile Delivery both via ReactApps, As well as Android Mobile.
- ❖ Shared Portal Services – Architecture Inclusion.
- ❖ PLL/SSO – Front-End Design
- ❖ GPS Enabled Front-End And DB Requirements



* JSS is responding as a USC employee, however my company seeks to make the best use of my time. We seek to use our College efforts to improve our company performance, and strategy. This means we don't want to write any code we cant use again in the future.

02 - NEW SCOPE

- ❖ Can Support Any Park Related Activity in any Billing Form.
- ❖ Dirtbikes, Mountain Bikes, Camping, Rafting, Skiing, Tent Rentals, Campground Stores, etc.
- ❖ Supports Enhanced Account Management Over Users.
- ❖ Supports GIS functions including Driving Directions and Maps.
- ❖ Supports Visualizations.

HOST PORTAL EVOLUTION

- ❖ Gen1 ->590 -> Minimalistic Adaptive Framework with Manager Buttons, Advanced Auth Controller, Support for ISP Users, and Employee Users.
- ❖ Gen2->498x2 -> Upgraded and Fixed Bugs, Expanded View of Azure Portal for most HR tasks, New Profile Pages. Support for Hosting, GridServices, Full Telecom Inventory and More. Ported the Gen1 Code to Postgres on Google Cloud.
- ❖ Gen3-> EIS Upgrade. Added Visualizations across the ITSM Fabric, Automation, and Significant Administrative Capabilities support Multiple Instances, Shards, etc.
- ❖ Gen4, and Gen5 have been approved for MS/PHP work by Dr. Valtorta and have been designed but not constructed.
- ❖ DIRTBIKES AND PORTALS
 - We are Using a Codebase Significantly Different than Gen1-3 as it replaces Auth, and is running a very basic auth controller with low security on the network side. It does However use the Portal Logic, Administrator, Superuser, and Identity Structure post login from the Gen1 site.
 - 547Bikes is Gen1(BranchB). Its not using any of the code I built for my research project, AND its running on Postgres on Azure without a DBMS. It has Zero Cost on Azure, and is an incredible choice in practice.
 - All the Screens for Non-Admin functions are new in this iteration EXCEPT the profile and User Tables which I have used in near exact form. It took quite awhile to debug UserXUserProfile with triggers, and views, and we decided that this was very valuable practice.

A Look at Architectural Issues

UI

- ❖ www.547Bikes -> On Google using HTML/JS
- ❖ home.547Bikes -> On Azure using HTML/JS
- ❖ App.547Bikes-> On Google using React
 - App can easily be converted into Android Code.
 - App can be converted to IOS code but it takes a month or so...
- ❖ CG React
- ❖ CLI Under Construction from Fall 2024
 - on MySQL and SQLServer.

API

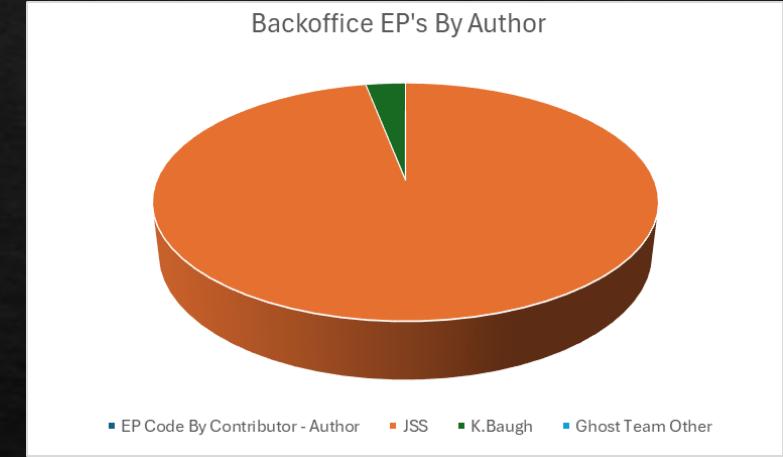
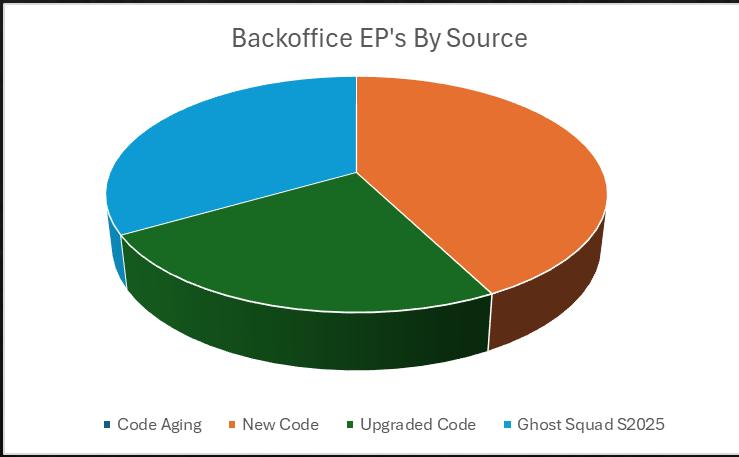
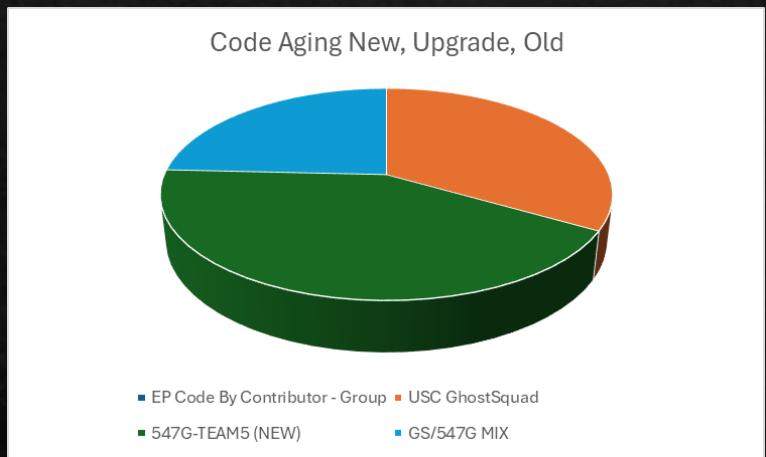
- ❖ Live API on Google running 33 Sets of Endpoints on Avg 4.5.
- ❖ Live API on Azure using Custom Domains.
- ❖ Swearengen -> VS Latest Build for BackOffice
- ❖ Sumwalt -> VS Code For BackOffice For Repo Synchronization. (Sumwalt I have Admin Rights as a GTA).

SQLITE DATABASE v 3.3+ ON LINUX(DEBIAN13) & WINDOWS(AZURE)
Using a Common File Format, But Different Binaries
Working Beautifully And Free on Azure

Many Lessons Learned in Gen3

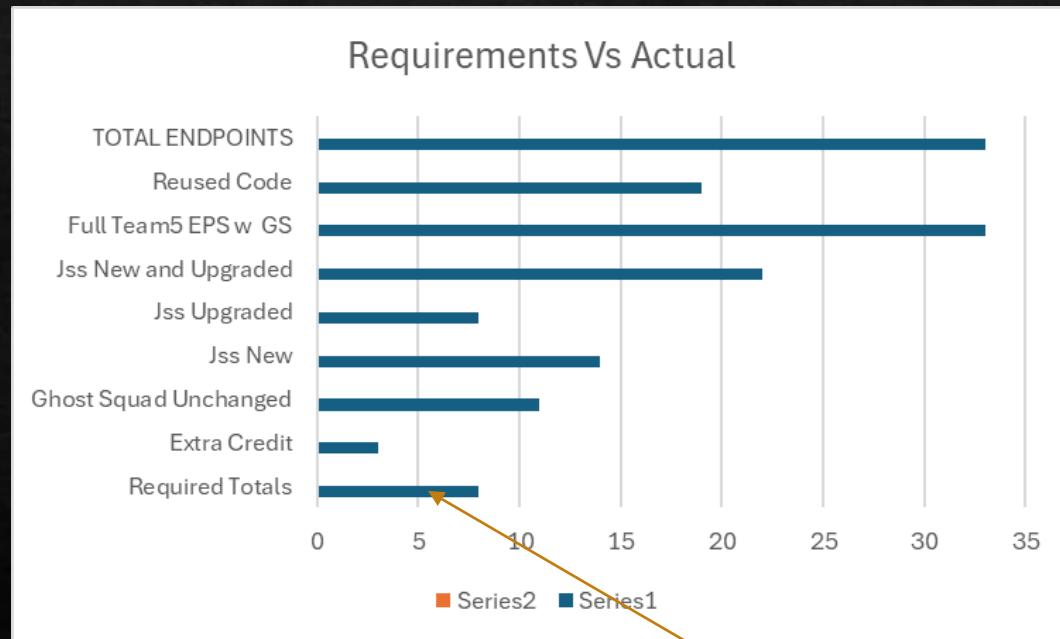
- ❖ Update Controllers Can be Designed to ignore Nulls, making them ok for Partial Puts.
- ❖ Backside Direct to Database API Logs are kinda cool.
- ❖ Copilot with Github can be an incredible tool if you pre-train the responses with JSON formatted output (from Swagger).
- ❖ Had time to review challenges during the first two semesters which had different issues related to Code-First/Non-Relational Structures vs Endpoints(Gen1), and the shear size of Auth(Gen2).
 - Auth over REST consumed more than 60% of our Team Resources this spring.
 - The EP's delivered over Semi-Strucutered MySQL in my opinion didn't work in a hosted format due to timing issues with React Data Drivers.

03-(1) - CODE Analysis



- JSS The author of 97% of the Code all in 2025 Calendar Year.
- There are 14 New Endpoints Constructed by JSS for this Project.
- There are 19 Endpoints Either Existing Or Upgraded All on Portal Tools, and Security owned by USC/GS Squad25.
- We are reusing 53% of the project code on the Backend for this project, and a Higher Percentage on the UI.

03-(2) - Rubrick Vs Actual.



Rubrick Required Endpoints vs Additional		
Description	Eps	Variance
Required Totals	8	
Extra Credit	3	
Ghost Squad Unchanged	11	
Jss New	14	75%
Jss Upgraded	8	0%
Jss New and Upgraded	22	175%
Full Team5 EPS w GS	33	313%
% Reused Code	19	58%
TOTAL ENDPOINTS	33	100%

There are 8 Required EPs, and 3 Extra Credit EPs required in Backoffice.

We have Built 14 New EPS, Upgrade 8, and Reused 11

03(3) - Result

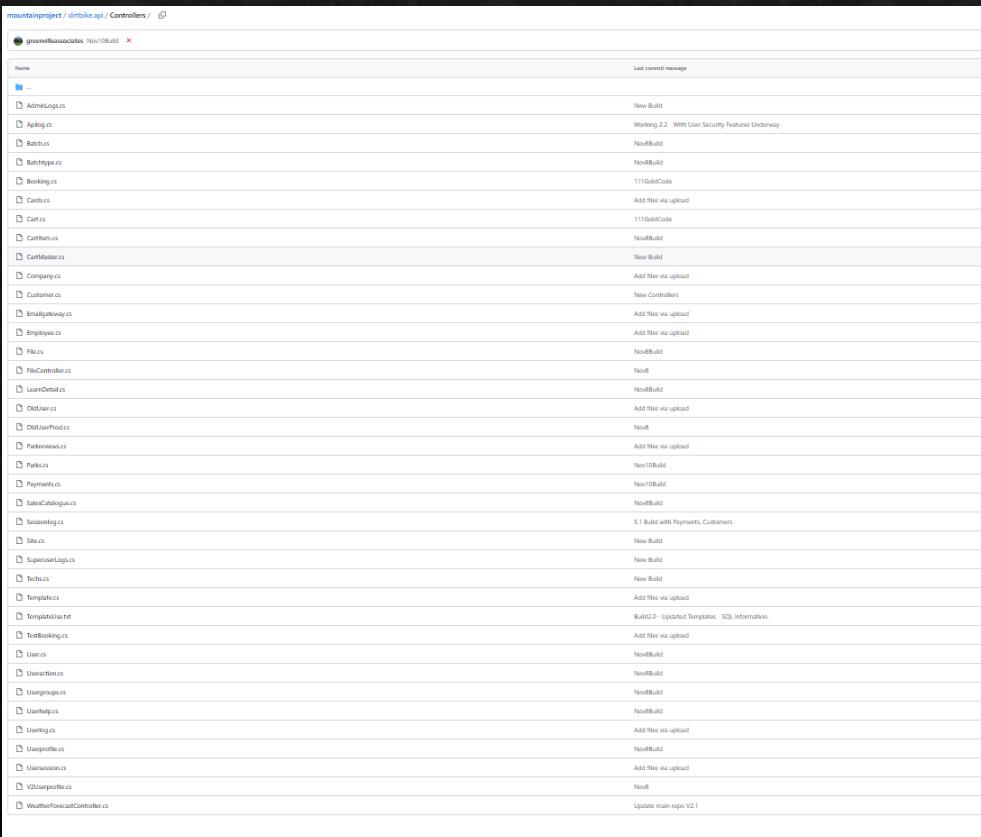
- ❖ Having More Backoffice Endpoints that work, only creates the possibility of applications which might perform better.
- ❖ Actual UI/BackOffice integration is the Differentiation/Complexity of Any Service Offering.

03(4) – UI Analysis

- ❖ The UI Is Substantially all new code:
 - ❖ Park Selector
 - ❖ Park Booking
 - ❖ Park Payment
 - ❖ Cart
 - ❖ Reservations
 - ❖ Product Catalogue
- ❖ We are reusing Backoffice DBMS architectures, but have rewritten everything else.
- ❖ We are using User, and Manager Stories Developed by Ghost Squad which exist in the Index.html Homepage.
- ❖ The UI is Approximately 30 Web Pages, 23 New, 7 Reused (Index, About, Admin, AdminStuff, Help, Profile, Manager).
- ❖ JSS Wrote all the Code, except for the CSS Template (which was beautiful) developed by Ghost Squad.
- ❖ Login.html has been replaced for Sprint 1 but we are debating that for Sprint2.

DB vs EPs

- ❖ There is one DB Table For Every Entry EP with the exception of:
 - ❖ Auth which uses the User/UserProfile Tables.
 - ❖ File Upload which is OS Dependent
 - ❖ Profile Picture Upload which is Target Dependent.
- ❖ There are 33 Endpoints in Production. We expect that to move to 35 by final with Auth, and Stripe Payments tables being added for Sprint2.
- ❖ There are approximately 30 DB Tables for Sprint1 in production all in SQLite.
- ❖ We are considering using Azure SSO on the GhostSquad Auth for Final.



Form and Flow Compliance - Sales to Pay

The image shows the homepage of MyLinkv25. At the top left is the logo 'MyLinkv25'. On the top right are icons for a user profile ('Park Guest'), 'Logout', and a search bar ('Search Park'). Below the header is a large banner image of a winding blue river through green mountains, with three people on mountain bikes on the right side. The main title 'Welcome to MyLink' is centered in a large, bold, white font. Below it is a subtitle 'Your one-stop solution for Camping, Biking, Outdoor Recreation, and More!'. The page is divided into several sections: 'Check your Reservations' (with a 'Reserve Now' button), 'Review Parks' (with a 'View Parks' button), 'User Reviews' (with a 'View Reviews' button), and 'Park Visualizations' (with a 'View Visualizations' button). Each section has a brief description and a small icon.

HomePage

MyLinkv25 - Review Parks		Welcome, Park Guard
<p>Filter by State:</p> <p>SC</p> <div style="border: 1px solid #ccc; padding: 10px; margin-bottom: 10px;"> Paris Mountain State Park Region: Upstate State: SC Address: 2401 State Park Rd, Greenville, SC 29609 Phone: 864-244-5565 Trail Length: 5 miles Difficulty: Intermediate to Advanced Day Pass: \$2.00 Description: A Great Place Named After Paris Hilton and that cool guy from the Iliad and the Odyssey. GPS: 34.94158, -82.41128 CapacityMax: 1 CapacityCurrent: 1 Trail Map Book This Park Open in Google Maps Get Driving Directions See Reviews Of This Park View Park Pictures </div> <div style="border: 1px solid #ccc; padding: 10px; margin-bottom: 10px;"> Croft State Park Region: Upstate State: SC Address: 450 Croft State Park Rd, Spartanburg, SC 29302 Phone: 864-585-1283 Trail Length: 20 miles Difficulty: Intermediate Day Pass: \$3.00 Description: Over 20 miles of trails through woodlands and around lakes GPS: 34.9026, -81.81435 CapacityMax: null CapacityCurrent: null No trail map available Book This Park Open in Google Maps Get Driving Directions See Reviews Of This Park View Park Pictures </div>		
<h1>Select Park & Details</h1>		

Select Park & Details

 Park Guest [Logout](#)

Issaqueena Trails

Region: Upstate

State: SC

Address: Issaqueena Lake Rd, Clemson, SC 29631

MyLinkv25 - Review Parks

Park Guest

Logout

Paris Mountain State Park

Region: Upstate

Address: 241 State Park Rd, Greenville, SC 29609

Phone: 864-244-5565

Trail Length: 5 miles

Difficulty: Intermediate to Advanced

Day Pass: \$2.00

Description: A Great Place Named After Paris Hilton and that cost guy from the West and the Odyssey

GPS: 34.9158, -82.41128

[View Park](#)

[Book This Park](#)

[Open Google Maps](#)

[Get Driving Directions](#)

[See Reviews Of This Park](#)

[View Park Pictures](#)

Available Park Items

(1) Day Use Unreserved Fees: \$6.00
(1) Day Use Reserved Fees: \$12.00
Full Service Campsites and Overnight Camping at Park: 1
Full Service Campsites and Overnight Camping at Park: 2
Full Service Campsites and Overnight Camping at Park: 3
Park Name: - Outdoor Recreation -
Last Update: Friday, March 2019

Start: 04/01/2020 End: 04/01/2020

Adult:

Children:

[Add Item\(s\)](#) [Remove Item\(s\)](#) [Save Item\(s\)](#)

Selected Items

MyLink25

©2019 Park Guest

National Park Guest

Park:



Parc Mountain State Park

Address: 2401 State Park Rd, Greenville, SC 29609

CartID: 032314

CartType: Combination

Description: More Than Two Items in Cart

TotalCartItems: 5

TotalPrice: \$0

DateAdded: 2023-11-07

CheckOutCart: No

Select for Payment

Remove from Cart

Checkout

Pay to Reservation

Welcome Park Guest

Park: Paris Mountain State Park

Address: 2401 State Park Rd, Greenville, SC 29609

CartID: 821314

CartType: Combination

Description: More Than Two Items in Cart

TotalCartItems: 3

Total Price: \$0

Date Added: 2025-11-07

Checked Out: No

Select for Payment

Remove from Cart

Checkout

Welcome Park Guest

Your Cart Summary

CartID	UserID	Park Name	ParkID	Item	Description	TotalItems	Total Price	Start Date	End Date	Adults	Children
821314	1	Paris Mountain State Park	11	Combination	More Than Two Items in Cart	0	\$0	2025-11-07	2025-11-07	0	0

Total Amount: \$0.01

Pay Now

Welcome Park Guest

Choose a Credit Card

Add Card

Card Type	Vendor	Last 4 Digits	Expiration	Billing Zip	Action
Discover	Bank of America	3321	04/2026	29201	Pay Now Update Cart
VISA	Wells Fargo	3233	11/25	29201	Pay Now Update Cart
Amer	Cheese Bank	6634	2025/01	29201	Pay Now Update Cart

Review My Reservations

Carts Allows Selection of CartItems to Pay

A Summary of Items is Presented before Payment.

Choice of Credit Card

Welcome Park Guest

Choose a Credit Card

Update Cart

Card Type	Vendor	Last 4 Digits	Expiration	Billing Zip	Action
Discover	Bank of America	3321	04/2026	29201	Pay Now Update Cart
VISA	Wells Fargo	3233	11/25	29201	Pay Now Update Cart
Amer	Cheese Bank	6634	2025/01	29201	Pay Now Update Cart

Repayment of \$0.01 processed using card ending in 3321.

Transaction ID: Q502498218

Cart ID: 821314

User ID: 1

Review My Reservations

Welcome Park Guest

Active Reservations

Show 10 of 10 entries

BookingID	UserID	ParkID	CartID	Park Name	Booking Start	Booking End	Adults	Children	Total (\$)	Transaction ID	Booking Type	Booking Status	Action
83	1	11	821314	Paris Mountain State Park	2025-11-07T00:00:00	2025-11-07T00:00:00	1	0	0.01	Q502498218	Biking	Active	Review Cancel
84	0	1	247343	Barr National Park	2025-11-07T00:00:00	2025-11-07T00:00:00	1	1	0.01	JAHM41414352	Biking	Active	Review Cancel
83	1	29	539604	Franklin Mountains State Park	2025-11-07T00:00:00	2025-11-07T00:00:00	1	0	24.00	XD1239323743	Biking	Active	Review Cancel

Welcome Park Guest

Reservation Summary

Cart ID	Park Name	Park ID	User ID	Status	Payment ID	Total Items	Total Price	Trans Date	ResStart	ResEnd
115684	Franklin Mountains State Park	12	1	Checked Out	102190303743	2	\$24.00	2025-11-02	2025-11-02	2025-11-02

Cart Items

ResID	ResEnd	Description	Qty	Price	Total
2025-11-02	2025-11-02	Park Movie Ticket, \$12.00	2	\$12.00	\$24.00

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Confirmation of Payment Given

Button to Review Completed Booking

Booking Allows You to See Parent/Child Relationship

Manager Screens for (Sprint2)

- ❖ User
- ❖ Parks
- ❖ Sales Catalogue
- ❖ Park Employees
- ❖ Sales Reports
- ❖ Security Tools
- ❖ User Profile Management

All Complete Already.

UI Modifications & Considerations for S2.

- ❖ Support for G/A Mobile App Environment.
- ❖ Support for CG Provided UI Is it Necessary.
- ❖ Support for Android?