1. **System Objective**

Develop a computerized software system that enables RV Park staff to check the availability, register RV clients and book RV sites. On each event, the system will display on a large screen a digitized RV park map showing sites by type and status. This system will help to manage the RV Park reservation more conveniently.

1. **Project Roles/Responsibilities**

Client Staff

* Matt Townsend – Chair RV Committee – Project sponsor and contact, responsible for providing information and for approving deliverables

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Technical Staff

* Dr. John Akinyemi – Project Advisor, responsible for advising the team

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* Alfredo Morgado – Developer, responsible for systems analysis, design and development

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* Md Abdus Sadeque – Developer, responsible for systems analysis, design and development

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1. **Business Benefits**

The new system will:

* Reduce the time needed to process registration and booking.
* Improve the accuracy of information gathered through computerized validation.
* Accelerate searches for information about RV Park sites, customers and payments.
* Perform accurate storing and tracking of RV Park site’s information and its status.
* Manage the reservation data more easily by displaying the major information in a large screen.

# Requirements

1. **Functional Requirements**

| **Event** | **Source**  **Actor** | **Use Case**  **ID** | **Use Case**  **Name** | **System**  **Response** | **Destination**  **Actor** |
| --- | --- | --- | --- | --- | --- |
| Add a customer | RV Park Staff | UC01 | Add customer | Add confirmation displayed | RV Park Staff  Customer |
| Change customer’s detail | RV Park Staff | UC02 | Update customer | Update confirmation displayed | RV Park Staff  Customer |
| Add a country | RV Park Staff | UC03 | Add country | Add confirmation displayed | RV Park Staff |
| Update country detail | RV Park Staff | UC04 | Update country | Update confirmation displayed | RV Park Staff |
| Add a province | RV Park Staff | UC05 | Add province | Add confirmation displayed | RV Park Staff |
| Update province detail | RV Park Staff | UC06 | Update Country | Update confirmation displayed | RV Park Staff |
| Add a party member information | RV Park Staff | UC07 | Add party member | Add confirmation displayed | RV Park Staff |
| Update a party member information | RV Park Staff | UC08 | Update party member | Update confirmation displayed | RV Park Staff |
| Add a staff representative | RV Park Staff | UC09 | Add staff | Add confirmation displayed | RV Park Staff |
| Update a staff representative | RV Park Staff | UC10 | Update staff | Update confirmation displayed | RV Park Staff |
| Reserve a RV Site for a customer with payment | RV Park Staff | UC11 | Reserve a site | Booking confirmation displayed | RV Park Staff  Customer |
| Change reserve information or include payment information | RV Park Staff | UC12 | Update reserve information | Update confirmation displayed | RV Park Staff  Customer |
| Cancel a RV Park site reserve | RV Park Staff | UC13 | Add cancel reserve information | Delete confirmation displayed | RV Park Staff  Customer |
| Add customer check-in information | RV Park Staff | UC14 | Add check-in information | Add confirmation displayed | RV Park Staff |
| Change customer check-in information | RV Park Staff | UC15 | Update check-in information | Update confirmation displayed | RV Park Staff |
| Add customer check-out information | RV Park Staff | UC16 | Add check-out information | Add confirmation displayed | RV Park Staff |
| Change customer check-out information | RV Park Staff | UC17 | Update check-out information | Update confirmation displayed | RV Park Staff |
| Staff creates a new event | RV Park Staff | UC18 | Create a new Event | Receive event information and save into database | Staff |
| Staff uploads and parses a KML file | RV Park Staff | UC19 | Upload and Parse a KML file | Load KML file, parse and generate site objects  Save RVSite and StyleURL into database | Staff  RVSite, StyleURL table |
| Staff inserts site type information | RV Park Staff | UC20 | Insert site type information | Retrieve RVSite and StyleURL lists from database  Receive SiteType input related to each StyleURL, and save SiteType, SiteRate into database | Staff  SiteType table |
| Staff Updates Event’s Information | RV Park Staff | UC21 | Update event’s information | Retrieve information from database and save update | Staff  Tables |
| Refresh Sites Display | System Timer | UC22 | Refresh Sites Display | Retrieve update of site’s book information and redraw them | Staff & Customer |

1. **Non-functional Requirements**
   * + The system must be easy for new staff to learn and use
     + Site status update on the large screen must not exceed 2 minutes
     + System response time must not exceed 5 seconds
     + The system must be backed up daily
2. **Optional Requirements**
   * + Clients book sites through the IPM website
     + Online payment processing
     + Schedule of sanitizing
     + Convert map files in DWG format
     + Wide range of patterns to indicate site status
3. **Project Critical Success Factors**

* The project sponsor must approve deliverables and make decisions in a timely manner
* The project contact must be available to answer questions at least one day a week
* IPM Event must arrange an internet server provider (ISP) to host the system
* IPM Event must provide a network connection for the system devices to access the web
* The map input in the system must be in a file format known as KML (Keyhole Markup Language)

1. **Technical Architecture**

* Web Server: IIS (Windows)
* Application Server: ASP.NET 4.0
* Database Server: MySQL 5.6
* Development environment: MySQL Workbench 6.2.5, Visual Studio 2015 MVC4 SOLID, Github
* Client devices: Windows 7 or higher
* Network Diagram:

