Use Case Name	01: Campus Pathfinding
Participating Actors	User
Goal	To find a Path between two locations on campus
Trigger	User selects a starting point and an ending point
Precondition	User has selected two points on campus
Postcondition	A traversable path is drawn between the two points

Basic Flow	1. User selects a starting point: a building, door, classroom, or other selectable map location
	2. User selects an ending point: a building, door, classroom, or other selectable map location
	3. User is shown a traversable path
	  a. User is shown shortest path (default)
	  b. User has previously hit the Disabled User button and is shown a path which does not use stairs.
	  c. User has previously hit the Indoor Path button, and is shown a path that is as indoor as possible
	  d. User has previously hit the Outdoor Path button, and is shown a path that is as outdoor as possible

Exceptions	1. *No path can be calculated these two points*: User is notified of system error. 2. *No stairless path can be calculated these two points*: User is notified that no stairless path exists.
Qualities	Intuitive, Quick (< 5 seconds)
Constraints	1. User must select two distinct points. 2. User must be shown a traversable path. 3. Disabled Users must not be directed to stairwells.
Includes	none
Extends	02: Location Selection
Corresponding User Stories	5, 6, 7, 8

Use Case Name	02: Location Selection
Participating Actors	User
Goal	To select a building, door, classroom, or other selectable map location to receive more information about it, or to use it as a pathing waypoint.
Trigger	User clicks on a selectable location
Precondition	User is at the map overlay screen (interior or exterior)
Postcondition	The location is highlighted. Information and pathfinding buttons are shown.
Basic Flow	1. User is at the map overlay screen (interior or exterior) 2. User selects a building, door, classroom, or other selectable map location by either a mouse click or a touch event. 3. The point is highlighted. A popup is shown which displays information about the selected object, along with buttons to use the point in forming a path, or viewing the interior map (if possible).
Exceptions	1. *The clicked location is not selectable:* system takes no action. 2. *Information about the location cannot be found:* A generic U of A logo is shown instead of information.
Qualities	Intuitive, Quick (< 1 seconds)
Constraints	1. Location must be selectable.
Includes	none
Extends	none
Corresponding User Stories	3, 4

Use Case Name	03: Current Location
Participating Actors	User
Goal	To view my current location on the exterior map
Trigger	User clicks the 'Find My Location' button
Precondition	User is at the exterior map overlay screen
Postcondition	User is shown current (approximate) location with a blue dot

Basic Flow	1. User Clicks 'Find My Location' button
	2. Display the location with a blue dot
	   a. If the user is on a mobile device and has given the App access to location services, we will use Google Maps to approximate the location of the mobile device using its built in GPS.
	   b. If the user is on a computer, we will use Google Maps to approximate location of the computer by router IP.

Exceptions	1. *User cannot be located*: User is shown an error message describing that he/she cannot be located.
Qualities	Intuitive, Quick (< 2 seconds)
Constraints	1. User must have location services turned on.
Includes	none
Extends	none
Corresponding User Stories	1

Use Case Name	04: Interior Map Viewing
Participating Actors	User
Goal	To view the interior floors, rooms, doors, emergency exits, and services of a building
Trigger	User selects a building and click 'View Interior' button
Precondition	User is at the Exterior Map overlay
Postcondition	User is presented with the Interior Map overlay
Basic Flow	1. User selects a building and then presses the 'View Interior' button. 2. User is shown a navigatable Interior Map overlay, which shows the floors, rooms, doors, emergency exits, and services of the selected building.
Exceptions	1. *System cannot find Interior Map*: error is displayed describing that system is having issues and Interior Map could not be found.
Qualities	Intuitive, Structured, Quick (< 5 seconds)
Constraints	1. Building must have interior map overlay. 2. Building must be selectable from exterior screen.
Includes	none
Extends	02: Location Selection
Corresponding User Stories	2

Use Case Name	05: Alteration of Path
Participating Actors	User
Goal	To modify the presented path to allow for waypoints(stops) or detours
Trigger	User clicks the 'Add Waypoint' button.
Precondition	User is viewing a Path between at least two points, which has been drawn by the system.
Postcondition	User's waypoint is added into the path and a new path is calculated and presented which incorporates the waypoint or detour.
Basic Flow	1. User clicks the 'Add Waypoint' button. 2. User clicks a selectable location. 3. The location is added to the route and the path is redrawn. a. User may reorder the route waypoints, if desired.
Exceptions	1. *The clicked location is not selectable:* system takes no action.
Qualities	Intuitive, Structured, Quick(< 5 seconds)
Constraints	1. Location must be selectable. 2. User must be shown a traversable path.
Includes	none
Extends	01: Campus Pathfinding
Corresponding User Stories	9

Use Case Name	06: Easily Add Service Waypoints
Participating Actors	User
Goal	To add coffee or other service waypoints to my current path, automatically.
Trigger	User clicks the 'Add Service Waypoint' button and selects a service, such as coffee, from the popup list.
Precondition	User is viewing a Path between at least two points, which has been drawn by the system.
Postcondition	User's service waypoint is automatically added to the path.
Basic Flow	1. User clicks the 'Add Service Waypoint' button. 2. A popup list showing the selectable services appears. 3. User selects 1 or more services. 4. Service waypoints are automatically added to the route and the path is redrawn. a. User may reorder the route waypoints, if desired.
Exceptions	*1) Desired service cannot be found:* User is notified.
Qualities	Intuitive, Structured
Constraints	1. The nearest service should be added to the Path.
Includes	none
Extends	01: Campus Pathfinding
Corresponding User Stories	10