

Brock Butler Class Design Document
CD-MAP01 POSITION Class
Date Created: 02/26/2013
Version: 1.1

Revision History

Date	Version	Change	Author
02/12/2013	1.0	Initial Draft	Thomas Nelson
02/26/2013	1.1	Revised Draft	Thomas Nelson

Description

The POSITION class is designed to be used as a new type for other classes. It will hold a positions (x,y) coordinates as well as the location name and number. A POSITION will be used to return user position and navigation routes to the user interface. Finally this class will be capable of comparing itself to other positions.

Class Variables

- **int x;**
 - holds the positions x coordinate
- **int y;**
 - holds the positions y coordinate
- **int nodeNumber;**
 - holds the position number for comparison and database searching
- **string nodeName;**
 - holds the position name for return to the user interface
 - will be either a block letter or class code

Constructors

- **public Position ();**
 - creates a new position with all variables empty
- **public Position (int inputX, int inputY);**
 - creates a new position with x and y coordinates
 - sets all other variables empty

- **public Position (int inputNumber);**
 - creates a new position with a node number
 - sets all other variables empty

Methods

- **void setCoordinates (int inputX, int inputY);**
 - set x and y coordinates of the current position
- **void setNumber (int inputNumber);**
 - set the node number of the current position
- **void setName (string inputName);**
 - set the node name of the current position
- **int getX ();**
 - return the x coordinate of the current position
- **int getY ();**
 - return the y coordinate of the current position
- **int getNumber ();**
 - return the node number of the current position
- **int getName ();**
 - return the node name of the current position
- **bool compare (Position node);**
 - compares this position to another
 - returns Boolean value

Debugging Methods

- **void printCoordinates ();**
 - prints the x and y coordinates to the log for testing
- **void printNumber ();**
 - prints position number to the log for testing
- **void printName ();**
 - prints position name to the log for the testing

Class Responsibility Collaboration Card

Responsibilities	Collaborators
Holds x and y position	LOCATE
Holds position name	ROUTE
Holds position number	MAPPING
Compares two positions	
Returnable type to be used by other classes	

Class Design Sign-off

Name	Approval Status
Matthew Menonkariyll	
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