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CRC design for Project 6

(Note: Cx: classes; Rxy: responsibilities of Cx; Cxy: collaborators of Cx, where x,y are indexes).

C1: AMazeActivity:

    R11: provide options of either revisit or explore.

    R12: provide seek bar and buttons to keep the user inputs.

    R13: transport the user inputs to GeneratingActivity.

    C11: GeneratingActivity

    C12: PlayActivity

C2: GeneratingActivity:

    R21: generate maze according to the user inputs taken from AMazeActivity.

    R22: show the progress of the maze generation.

    R23: call PlayActivity once the maze is generated.

    C21: AMazeActivity

    C22: PlayActivity

C3: ManualPlayActivity:

    R31: calls when user choose manual driver and GeneratingActivity finishes loading.

    R32: provide visualization of the maze exploring so the user can play the game.

    R33: show remaining energy level.

    R34: show options for displaying the map.

    R35: display control panel according to user input of manual mode.

    R36: call FinishActivity according to the different game over scenario.

    R37: provide shortcut functionality to force switch to FinishActivity.

    C31: FinishActivity

    C32: AMazeActivity

C4: AutoPlayActivity:

    R41: calls when user choose auto driver and GeneratingActivity finishes loading.

    R42: provide visualization of the maze exploring so the user can play the game.

    R43: show remaining energy level.

    R44: show options for displaying the map.

    R45: display resume/pause buttons according to user's choice of auto driver.

    R46: call FinishActivity according to the different game over scenario.

    R47: provide shortcut functionality to force switch to FinishActivity.

    C41: FinishActivity

    C42: AMazeActivity

C5: WinFinishActivity:

    R51: display congratulate message if the user either walks out of the maze or uses shortcut.

    R52: show path length and energy consumption.

    R53: call AMazeActivity when user clicks back button.

    C51: ManualPlayActivity

    C52: AutoPlayActivity

    C53: AMazeActivity

C6: ZeroBatteryFinishActivity:

    R61: display insufficient battery message if the robot runs out of battery.

    R62: show path length and energy consumption.

    R63: call AMazeActivity when user clicks back button.

    C61: ManualPlayActivity

    C62: AutoPlayActivity

    C63: AMazeActivity