**Angry Birds AI Project Code Description**

**Team Name: The Blues**

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In order to see whether the trajectory contains hill or not, we have created a new Class named FindHills to calculates if there is a hill in the way of the trajectory.

In this class we have created a method called isReachable that takes in as an argument the Target Point and returns whether or not the trajectory has got a hill.

Here is the signature of the function:

public static boolean isReachable(Vision vision, Point target, Shot shot)

Also, We have created a new Class named Heuristic.

As mentioned in the report, we are considering two trajectories.

1. Horizontal (release angle <45)
2. Vertical (release angle >=45)

This function takes the Target point as an argument and returns whether to take the direct shot or the trajectory with launch angle of greater than 45.

The function’s signature is as follows:

Public static Boolean isHorizontal (Point targetPoint)

Returns true if Horizontal trajectory is better than Vertical

And then in the isHorizontal function, we first see if there is a hill in the horizontal trajectory by calling isReachable method, if so we choose the vertical shot directly.

Also if the selected bird is yellow bird, we choose the horizontal trajectory.

Now we see which trajectory has got minimum number of obstacles and return the trajectory with the least obstacles.

In order to select the topmost pig, we have a for loop that iterates over the Pigs and gives the pig with the minimum Y Co-ordinate.

And for yellow bird, we have chosen the pig with maximum Y Co-ordinate.

To skip the tough levels, we try the level thrice and if it fails in the third attempt then we skip the level in the Class NaïveAgent in the function run.