ANGRY BIRDS KINGFISHER

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FUNCTIONS IMPLEMENTED :

The following functions are implemented in ABUtil class.

difficultyOfTrajectory function is used to find the difficulty of the trajectory.

getLeftObsOfTrajectory function is used to get the left most object on trajectory path.

IsHillBetween function is used to find whether there is a hill or not on the trajectory path

We’ve added one feature to analyze and improve strategy. We’re taking logs of the actions and level scores in a file which we’ve analysed and improved strategy accordingly.

Strategy in parts:

Major changes are done in the NaiveAgent’s solve method.

First of all to select a pig, we’re using 2 strategies - one is to choose the nearest pig from the sling and the other one is to choose the highest pig.

Tricky part in our strategy is to choose a best shot:

First of all, we’ve selected the shot for lower angle. Then we are checking if the target is directly reachable by the upper angle trajectory then we switch our shot to the upper angle.

Now check that if there is one red bird and if difficultyOfTtajectory is showing that it can't be cleared by red bird then hit on the left side of the left-most supporter of selected pig (Trying to take a big shot).

Plus we're checking that if our final shot has a hill blocking in the trajectory path then we are switching to the higer angle trajectory to over pass the hill.  
 We’ve manipulated tap interval values according to the output.

Besides this, We’ve also created another agent MinCostAgent. In this agent we’re iterating through all the pigs and finding difficulties of their trajectories. We’re choosing least difficult trajectory. But this agent doesn’t seem to work in all cases. So we stick to NaiveAgent.

Scores of levels:

1st iteration:

1 - 29030

2 - 43560

3 - 40460

4 - 28070

5 - 64710

6 - 26010

7 - 31960

8 - 23450

9 - 43280

10 - 60670

11 - 42080

12 - 62260

13 - 32110 (2 tries)

14 - 55640

15 - 39810

16 - 58460

17 - 40140 (2 tries)

18 - 47630

19 - 33790

20 - 39120 (2 tries)

21 – 68010

Total score: 910250

2nd iteration

1 - 29410

2 - 43560

3 - 40460

4 - 27820

5 - 66930

6 - 35640

7 - 27980

8 - 27770 (2 tries)

9 – 39920

10 - 49370

11 - 42060

12 - 56550

13 - 36090 (3 tries)

14 - 55640

15 - 42350

16 - 53080

17 - 44800

18 - 45270

19 - 27760

20 - Took 6 tries and stuck - 0

21 - 80660

Total - 845350