Explanation of code

Class name: **Heuristic**

- In class Heuristic there is a function named ‘target_pt’, which returns the target point to shoot the pigs.
- In this function whole strategy is implemented.
- We are choosing the pigs and then retrieving the blocks surrounded to a particular pig.
- For the structure we are considering three situations.
    1. When there is only one pig left in the game, then target point will be the pig’s center point.

    2. This condition will only occur when there exist blocks left to the pig. Considering pig’s left structure, and in this structure dividing all the blocks according to its type. Like all the Ices are in one list, Wood in another and Stone in the other one list.
        - Then in all the lists finding nearest block to the pig. Means in the Ice containing list there would be one block which is nearest to the pig amongst all the blocks, same for the wood and stone.
        - So we will get total 3 blocks wood, ice and stone which are nearest to the pig.
        - After finding type wise nearest block, we will check the active bird. So target block will be taken according to the active bird on the sling because birds have different priority to the blocks. Example Yellow bird can easily hit to the wood. So giving priority to the blocks according to the bird.
        - If YellowBird is active and there is no wood in the left structure then our next priority would be Ice and if Ice also doesn’t exist then wood.

- If BlueBird , then first priority is Ice , then wood and then stone.
- If RedBird then we will find the nearest block among this three blocks wood, stone and Ice. Same for the WhiteBird and BlackBird.
- In above all the cases at last we will get one block which will be our target point

3. If 1st and 2nd condition fails then this condition will be executed. Means if there is more than one pigs exist and left of the pig there is no structure than we will check support of the pig.
    - We will find nearest support of the pig, means minimum Y-axis distance of the supporting blocks of the pig.
4. If 3rd condition also fails that means pig is alone. There no support of the pig and on the left side of the pig no blocks exist.
    - In this situation target will be the pig.

- In all the cases we have given lowest trajectory, because with the lowest trajectory we can make maximum damage of the structure and we can get the maximum score out of it.
- If particular level fails then we have changed the strategy and that strategy will be of Naïve agent. Randomly generating pigs and targeting the pig.

- Total score till 21st level is : 718640