Q2 a.) (i) Backface Roundhouse culling and index list

(ii) backface culling only renders the outside of a model reducing on the computing cost and index list uses a list of the vertecies to make a mesh and render it correctly

b.)

|  |
| --- |
| -1,-1,1 |
| 1,-1,1 |
| -1,1,1 |
| 1,-1,-1 |
| -1,-1,-1 |
| -1,1,-1 |

c.) (i) this will make a UV map

(ii) the data required is a index list

Q3

1. (i) BIOT = Binary Image Overlapping Test

(ii)

|  |
| --- |
| 129 |
| 195 |
| 126 |
| 36 |
| 36 |
| 126 |
| 195 |
| 129 |

(iii) ?

(iv)

|  |  |  |  |  |  |  |  |
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(v)?

b) (i) there not accurate as they make a collision detection box that is bigger then most normal game models now it is still used but layer on top of each other to make a detailed collision box

(ii) ?

1. Time is important because is something is moving too fast it might miss the target as the target might be in between 2 frames and the bullet will just go one frame to another skipping anything that lies halfways.

Q4

a.)

1. An AI in a game serves as enemys or teammates as they control none player characters and usually control the animals and all other living things that you cannot/do not control
2. \*Sensing Stage is where the AI either sees or hears you coming and gets curious so he will start walking to the source of the trigger.

\*The thinking stage is where the AI will think of wether its an enemy or a team mate and make the decision to either shoot, hide, run or do any other action

\*The advantages of FSM is its fast and easy to write up but its resource heavy and you cant get the full control if you need to tweak something, there also not the most reliable.

b.)

(i) It looks at the current layout of the board and run it through its known strategies to win by running an algorythim over the board.

(ii) The utility is the algorythim that it runs and makes the moves/actions.

1. The evaluation function is where it will evaluate the current situation and sent data to the utility functions so they can make moves/actions.
2. Chess is a game about playing strategies across a wider board then tic-tac-toe and also tic-tac-toe is a game about aligning x’s or o’s in a row of 3 where chess is not.

The performance could be improved by making its Evaluation functions to understand chess rather then tic-tac-toe.

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| o | x | o |
| o | x |  |
| x |  |  |

|  |  |  |
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| o | x | o |
|  | x | o |
| x |  |  |

|  |  |  |
| --- | --- | --- |
| o | x | o |
|  | x |  |
| x | o |  |

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| --- | --- | --- |
| o | x | o |
|  | x |  |
| x |  | 0 |

|  |  |  |
| --- | --- | --- |
| o | x | o |
|  | x |  |
| x | o |  |

Q5

1. (i) 2 c# files can inherit each other and share information and data

(ii) A playerHP file will inherit damage file.

(iii) MonoBehaviour means it only has one use.

(iv) ?

(v) 1. It can inherit each other

2. a reference to each other can be used

3. a manager can send data to each other

b.) ?