2016 autumn – Collision

Evan Barry

# Q3

## A)

i) Binary Image Overlap Testing

ii) 0, 1, 66, 254, 66, 1, 0, 0

128 64 32 16 8 4 2 1

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iii)

iv) There would be a collision where the black X is in the bottom right corner

## B)

i) AABBs generate big gaps around an object, allowing for false positives.

AABBs do not rotate

AABBs check if a corner of one box is in another box

ii) X-Axis

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| A | 80 | 100 | 300 | 319 | 320 | 331 |
| B | B | null | A | A,C | C | null |
| C |  |  |  | (A,C) |  |  |

Y-Axis

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| A | 60 | 80 | 380 | 391 | 400 | 411 |
| B | B | null | C | C,A | A | null |
| C |  |  |  | (A,C) |  |  |

Z-Axis

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| A | 180 | 205 | 210 | 215 | 220 | 250 |
| B | A | A,C | A,C,B | A,B | B | null |
| C |  | (A,C) | (A,B)(B,C) |  |  |  |