

CS 3114

Standard Output format for commands in Project 2

1. insert <name> <x> <y>:

- Point Accepted: <Single Space>(<name>, <Single Space><x>, <Single Space><y>)
- Point Rejected: <Single Space>(<name>, <Single Space><x>, <Single Space><y>)

2. remove <name>:

- If Success: do not report.
- If Failure: Point Rejected: <Single Space><name>

3. remove <x> <y>:

- If Success: do not report.
- If Failure: Point Rejected: <Single Space>(<x>, <Single Space><y>)

4. regionsearch <x> <y> <w> <h>:

- Points Intersecting Region: <Single Space>(<x>, <Single Space><y>, <Single Space><w>, <Single Space><h>)
(<name1>, <Single Space><x1>, <Single Space><y1>)
(<name2>, <Single Space><x2>, <Single Space><y2>)
X QuadTree Nodes Visited

If no points found intersecting region just print the top and bottom line.

If region is invalid:

- Invalid Region: <Single Space>(<x>, <Single Space><y>, <Single Space><w>, <Single Space><h>)

5. duplicates:

- Duplicate Points:
(x1, <Single Space>y1)
(x2, <Single Space>y2)

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Print each distinct point (x,y) in a separate line. If no duplicate points exist just print the top line.

6. search <name>:

If there are points with name <name>, print all the points in following order

- Point Found: <Single Space> (<name>, <Single Space><x1>, <Single Space><y1>)
- Point Fount: <Single Space> (<name>, <Single Space><x2>, <Single Space><y2>)

If there are no points with name print the following

- Point Not Found: <Single Space><name>

7. **dump:**

BST dump:

Node has depth <d>, <Single Space>Value<Single Space>(<name>, <Single Space><x>, <Single Space><y>)

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BST size is: <Single Space>4

QuadTree Dump:

Node at <Single Space><x>, <Single Space><y>, <Single Space><size>: <Single Space><Internal/Empty>

Node at <x1>, <y1>, <size1>: <Single Space><Internal/Empty>

(<name>, <Single Space><x>, <Single Space><y>)

(<name>, <Single Space><x>, <Single Space><y>)

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Node at <x1>, <y1>, <size1>: <Single Space><Internal/Empty>

(<name>, <Single Space><x>, <Single Space><y>)

Node at <x1>, <y1>, <size1>: <Single Space><Internal/Empty>

Node at <x1>, <y1>, <size1>: <Single Space><Internal/Empty>

QuadTree Size: <d> QuadTree Nodes Printed.

Quadtree dump must follow the indentation guideline.

Dump the child nodes in the following order:

NW, NE, SW, SE