Quiz 3 (submit to NINOVA)

Implement the functions given in the template,

- 20p `snake_spawn()`
- 20p `snake_grow()`
- 20p `snake_dump()`
- 40p `snake_move()`
- 0p if your code does not compile

The snake game implementation is using a Linked-List structure. The spawn function spawns the head of the snake at $8, 8$ and all the remaining nodes to the right of the head of the snake. There are 3 nodes at the beginning including the head of the snake. The grow functions appends one node at the end on top of the tail. The dump function prints the positions of the nodes of the entire snake with format `"(%2d,%2d) "`. The directions are defined in the template and the move function uses an integer to determine the direction of movement. The top-left corner is chosen as `0,0`, the direction `RIGHT` corresponds to positive `x` and the direction `DOWN` corresponds to positive `y`. The move function moves the snake by 1 unit in the given direction.

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The output of `main.c` is,

```
( 8, 8) ( 9, 8) (10, 8) (10, 8) (10, 8) (10, 8)
( 8, 7) ( 8, 8) ( 9, 8) (10, 8) (10, 8) (10, 8)
( 8, 6) ( 8, 7) ( 8, 8) ( 9, 8) (10, 8) (10, 8)
( 8, 5) ( 8, 6) ( 8, 7) ( 8, 8) ( 9, 8) (10, 8)
( 8, 4) ( 8, 5) ( 8, 6) ( 8, 7) ( 8, 8) ( 9, 8)
( 8, 3) ( 8, 4) ( 8, 5) ( 8, 6) ( 8, 7) ( 8, 8)
( 8, 2) ( 8, 3) ( 8, 4) ( 8, 5) ( 8, 6) ( 8, 7)
( 8, 1) ( 8, 2) ( 8, 3) ( 8, 4) ( 8, 5) ( 8, 6)
( 8, 0) ( 8, 1) ( 8, 2) ( 8, 3) ( 8, 4) ( 8, 5)
( 7, 0) ( 8, 0) ( 8, 1) ( 8, 2) ( 8, 3) ( 8, 4)
( 6, 0) ( 7, 0) ( 8, 0) ( 8, 1) ( 8, 2) ( 8, 3)
( 5, 0) ( 6, 0) ( 7, 0) ( 8, 0) ( 8, 1) ( 8, 2)
( 4, 0) ( 5, 0) ( 6, 0) ( 7, 0) ( 8, 0) ( 8, 1)
( 3, 0) ( 4, 0) ( 5, 0) ( 6, 0) ( 7, 0) ( 8, 0)
( 2, 0) ( 3, 0) ( 4, 0) ( 5, 0) ( 6, 0) ( 7, 0)
( 1, 0) ( 2, 0) ( 3, 0) ( 4, 0) ( 5, 0) ( 6, 0)
( 0, 0) ( 1, 0) ( 2, 0) ( 3, 0) ( 4, 0) ( 5, 0)
```

- Only solutions using the provided Linked-List structure are going to be graded.

- Do not define extra functions.
- You can only use the `malloc` and `free` functions from `stdlib.h`
- and the `printf` function from `stdio.h`, no other function call is allowed.

Only add your implementation to the given template. Do not include a main file or change the functions arguments, return types. Your submission is valid if you submit a valid c function file and if you submit a valid `student.c` file. Do not upload your main file.

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