

Tute 7: Introduction to Structures

Monday, 11 September 2017

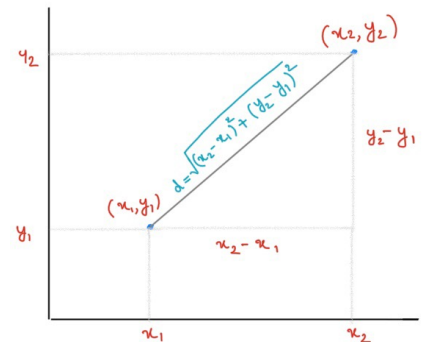
12:36 pm

Motivation

- Consider your assignment: In the last stage, you need to print top 5 strings sorted by their score. How did you store them?
- Hard to maintain a program using a huge list of multiple arrays.
- Use of structures to "package" a set of variables.
- Consider networked structures like Facebook. It is so hard to represent Facebook data just by using a list of arrays.
- Closeness to real world objects: we refer to a person's name, their address, etc.

Exercise 8.2

Define `vector_t` to store points in 2D and given two points (x_1, y_1) and (x_2, y_2) , write a function to find the distance between them.



Structure Definition

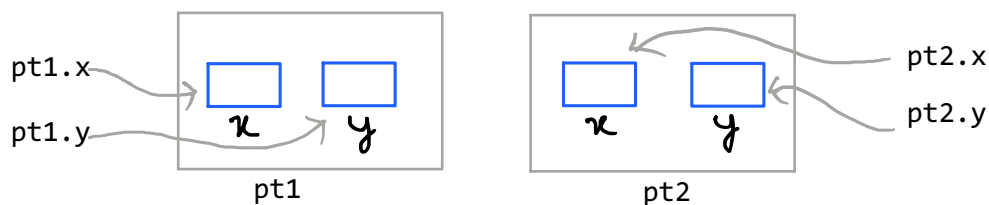
- Revising typedef
- Structure definition

```
typedef struct {  
    double x;  
    double y;  
} vector_t;
```

- At this point, `vector_t` is a user defined data type and you can declare variables like `vector_t pt1, pt2;`

Memory Allocation

pt1 and pt2 will have their own copies of x and y allocated in separate memory locations.



Note

Programs updated: <https://github.com/unnikrishnanta>

