

Assignment1-300219585_300258476

E26:

Design	Pros	Cons
Design 1	Allows the user to determine the main storage method.	It will take longer to return the coords in the converted form
Design 2/3	The polar version of the coords are easily accessed.	It will take longer to return the coords in the converted form
Design4	Both forms are easily retrieved.	Takes up more memory
Design 5	The user can create an object in the form more suitable to them	All pointCP objects have to follow a specific structure.

E28-E30

Test one 100 000 items each

Point CP 2

2642 Nanoseconds cartesian Stored as polar

2504 Nanoseconds polar stored as polar

Point CP 3

2546 Nanoseconds cartesian stored as cartesian

2579 Nanoseconds polar stored as cartesian

Point CP 5

2325 Nanoseconds cartesian stored as cartesian

2301 Nanoseconds polar stored as polar

Test Two 1 000 000 items each

Point CP 2

25182 Nanoseconds cartesian Stored as polar

25531 Nanoseconds polar stored as polar

Point CP 3

26446 Nanoseconds cartesian stored as cartesian

26711 Nanoseconds polar stored as cartesian

Point CP 5

24484 Nanoseconds cartesian stored as cartesian

24053 Nanoseconds polar stored as polar

After running each main method under each coordinate type, the first at 100 000 elements and the second test at 1 000 000 elements it can be seen that there is no difference between the designs.