**Question 1**

An interface can be used by other people, without the need for them to know the implementation.

A remote control is an example of an ADT.

**Question 2**

Static variables: say a variable int a is labelled “static”, then the variable will be put at the higher memory addresses, so it will live outside a function’s stack call.

Without Static label: int a will exist inside the Stack Frame and can’t be accessed once the frame is removed

* **Main():** Char array h[], int a, char array b[], double e, unsigned int g
* **Fun2():**
* **Fun1():**
* **Removing fun1()**: anything within lifetime of the function
* **Removing fun2()**: anything within lifetime of the function

**Question 3**

Structs have padding. Faster to have padding.

Whenever you Malloc something, always assert that the variable != NULL. (to check that Malloc hasn’t failed).

**Question 4 / 5**

**Iteration:**

* Happens inside our function stack frame

**Recursion**

* Need to worry about base case, to stop it eventually, otherwise memory will run out of space (looping until it does)
* Keeps creating a new stack frame until it collides with something.
* Recursion is slower than iteration, because there are a lot more operations with having to create a new stack frame.

**Question 8**

**USE PYTHON IN EXAMS TO DO EASY CONVERSIONS**

0b = represents binary 🡪 i.e. 1 decimal = 0b01

0x = represents hex 🡪 i.e. 1 decimal = 0x0001

8 = 0b1000

8 = 0x0008

127 = 0b1111111 (divide by 2)

127 = 0x7F (divide by 16)

**Question 9**