Part 1

Question 1)

C	Python
Low-level	High-Level
Manual memory management	Manages memory automatically
Faster and more efficient	Slower and less efficient
More complex syntax	Easy-to-read syntax
Structed oriented	Object oriented

PROS	CONS
Better performance	Complex syntax
Low-level control over memory	Memory leaks and buffer overflows
Used in embedded systems	Limited standart library
High speed	Absence of error handling
Support the pointers	No strict type and run - time checking

Question 2)

Int:	Integers, 4 byte.
Char:	A single character, 1 byte.
Float:	Single-precision floating-point numbers, 4 byte.
Double:	Double-precision floating-point numbers, 8 byte.
Long:	Extended range integer values, 4 byte.
Short:	Short-range integer values, 2 byte.
Bool:	True or False, 1 byte.

Question 3)

A pointer is a derived data type. It can store the address of other variables or represent memory location. The type of a pointer represents the type of data it points to. Void* means a memory address without specifying the data type it points to.

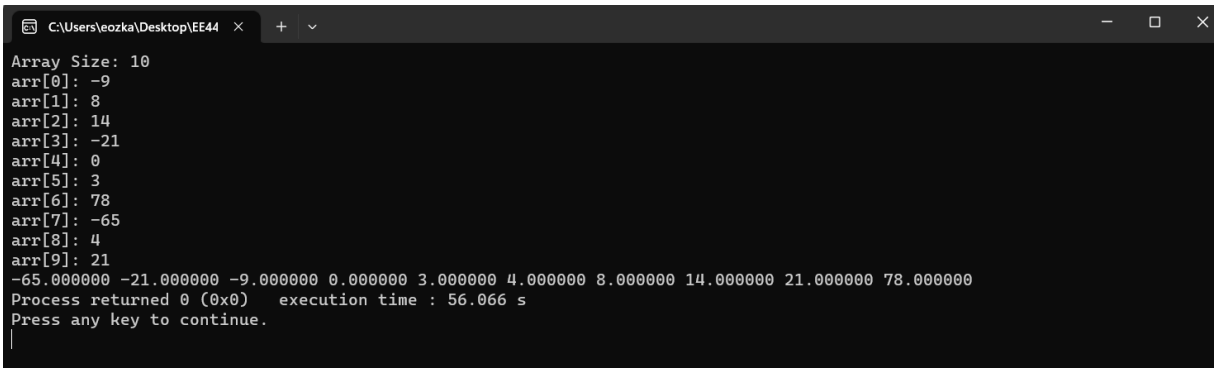
Question 4)

In Code 1, "&number" gives us a float pointer. The float pointer is converted into an int pointer. Then, the value is taken by dereferencing. Shortly, float memory is treated as int memory. Code 1 gives a different result from the original value.

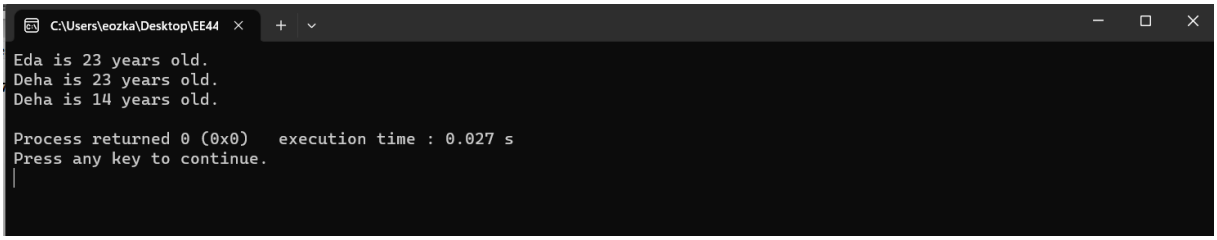
In Code 2, the program typecasts the float variable number into an integer, giving directly -42, which is the integer part of the float number.

Part 2

Question 1)



Question 2)



Question 3)