F28HS2 Hardware Software Interface
Tutorial 2

A) For each of the following C definitions/declarations, describe the definition/ declaration in English, draw a picture of the memory organisation, and calculate how much space is required for/allocated to an instance assuming:

```
char      1 byte
float     4 bytes
int       4 bytes
double    8 bytes
pointer   4 bytes
```

NB space allocated to a structure includes padding to align on an appropriate byte boundary e.g. 4 byte.

```
double a[7];
char b[5];
struct details {int age; float height;};
struct person1 {char name[4]; struct details d;};
struct person2 {char name[5]; struct details d;};
struct person1 people[15];
struct person2 teams[7][9];
struct person1 * persons[9];
struct person2 ** groups;
struct cell {int val; struct cell * left,* right;};
struct cell cells[50];
struct cell * nodes[25];
```

B) write a C function to reverse an integer array A of length N

C) write a C function to find the position of integer V in array A of length N with elements in ascending order using binary search. The function should return -1 if the search fails.