2a-struct

```
struct Flight {
   int id;
   char path[10];
struct Captain {
   char sign[4];
   char base[4];
struct Flight flight;
int main(int argc, char**argv)
   struct Flight *pF1 = (struct Flight *)malloc(sizeof(struct Flight));
   struct Flight *pF2 = (struct Flight *)malloc(sizeof(struct Flight));
   struct Captain *pC1 = (struct Flight *)malloc(sizeof(struct Flight));
   return 0;
```

Heap Memory

id	path[0]	path[1]	path[2]	path[3]	path[4]	path[5]	path[6]	path[7]	path[8]	path[9]	
id	path[0]	path[1]	path[2]	path[3]	path[4]	path[5]	path[6]	path[7]	path[8]	path[9]	
id	path[0]	path[1]	path[2]	path[3]	path[4]	path[5]	path[6]	path[7]	path[8]	path[9]	
sign[0]	sign[1]	sign[2]	sign[3]	base[0]	base[1]	base[2]	base[3]				

Heap Memory

path[8]

path[8]

path[8]

path[7]

path[9]

path[9]

path[9]

```
struct flight_structure {
   int id;
                                                             id
                                                                    path[0]
                                                                                     path[2]
                                                                                                                       path[6]
                                                                                                                                path[7]
                                                                            path[1]
                                                                                              path[3]
                                                                                                      path[4]
                                                                                                               path[5]
   char path[10];
} Flight;
                                                                                     path[2]
                                                                    path[0]
                                                                            path[1]
                                                                                              path[3]
                                                                                                                       path[6]
                                                             id
                                                                                                      path[4]
                                                                                                               path[5]
                                                                                                                                path[7]
struct captain_structure {
   char sign[4];
                                                                                             path[3]
                                                             id
                                                                    path[0]
                                                                            path[1]
                                                                                     path[2]
                                                                                                      path[4]
                                                                                                               path[5]
                                                                                                                       path[6]
   char base[4];
Captain;
                                                                                              base[0]
                                                                                                      base[1]
                                                                                                               base[2]
                                                           sign[0]
                                                                    sign[1]
                                                                            sign[2]
                                                                                     sign[3]
                                                                                                                       base[3]
Flight flight;
                                                                                      Instead of always writing struct this variable ....
int main(int argc, char**argv)
                                                                                      One can declare a struct as a type.
   Flight *pF1 = (Flight *)malloc(sizeof(Flight));
                                                                                      This is done by using the reserved word typedef.
   Flight *pF2 = (Flight *)malloc(sizeof(Flight));
                                                                                     typedef struct abc ABC;
   Captain *pC1 = (Flight *)malloc(sizeof(Flight));
                                                                                      Then you can write
   return 0;
                                                                                      ABC myAbcVariable;
```