```
#include <stdio.h>
#include <stdlib.h>
typedef struct Neuron {
  int neuronNum:
  double input;
} Neuron;
int main(void) {
  Neuron *pNeuron;
                                         Main memory
                                             Stack
       1 pNeuron is a pointer
          that should hold the
                               pNeuron
          address of a Neuron.
          but it currently holds
           a garbage address.
                                             Heap
  pNeuron = (Neuron *)malloc(sizeof(Neuron));
       2 allocates sizeof(Neuron) bytes on the heap
                                         Main memory
                                            Stack
3 pNeuron hold the address
                                          &(Neuron
                               pNeuron
  of this newly allocated space
                                           on heap)
                            member
                            identifier
                           neuronNum
                           input
                                             Heap
  pNeuron->input = 23.96;
                                         Main memory
                                            Stack
                               pNeuron
                                          &(Neuron
                                           on heap)
                            member
                            identifier
  4 change input in
                           <u>neuronNum</u>
                           input
                                            23.96
        Neuron that
     pNeuron points to
                                            Heap
  printf("pNeuron->input = %.2lf\n", pNeuron->input);
                         5 need to free memory
  free(pNeuron);
                              space allocated
  return 0;
}
```