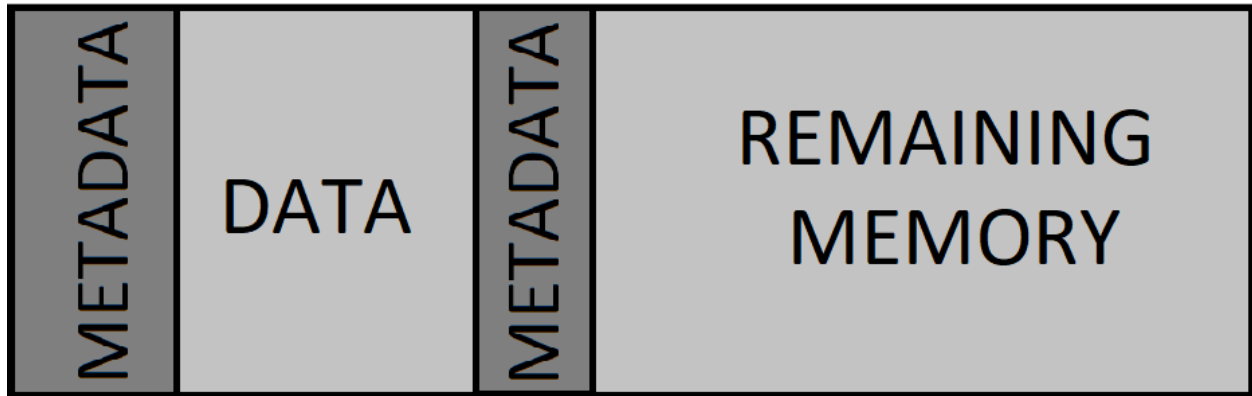Malloc and Free Design using First Fit Algorithm

Metadata – was constricted as an explicit list that uses pointers, size, and free variable. A linked list data structure was used here

Every malloc() call allocates size of data and size of each metadata block, excluding any call that is the size of the remaining memory. When free is called the free variable is set to true, and when malloc is called the free variable is set to false. Whenever free is called free calls merge which checks for adjacent free blocks like this.

Adjacent free blocks are merged and the second metadata block is deleted to free up space.