// Q.2 //

i   Dynamic memory allocation is when an executing program requires that the operating system give it a block of main memory.

ii   The program then uses this memory for some purpose.

(iii) Usually, the purpose is to add a node to a data structure.

\# - advantage

(i) The main advantge of using dynamic memory allocation is preventing the wastage of memory.

(ii) This is because when we use static memory allocation, a lot of memory is wasted because all the memory allocated cannot be utilised.

\# memory fragmentation:
leeeping track of allocated and deallocated memory is complicated. A modern operating system does all this.

Heap

dynamically
allocated memory

Data Segment