#include <stdio.h>

#define NUM\_PARTITIONS 6

int main()

{

int partitions[NUM\_PARTITIONS] = {300, 600, 350, 200, 750, 125};

int num\_processes = 5;

int processes[] = {115, 500, 358, 200, 375};

printf("Initial memory partitions:\n");

for (int i = 0; i < NUM\_PARTITIONS; i++)

{

printf("%d KB ", partitions[i]);

}

printf("\n");

for (int i = 0; i < num\_processes; i++)

{

int j;

for (j = 0; j < NUM\_PARTITIONS; j++)

{

if (processes[i] <= partitions[j])

{

printf("Process %d (size %d KB) allocated to partition %d (size %d KB)\n",

i + 1, processes[i], j + 1, partitions[j]);

partitions[j] -= processes[i];

break;

}

}

if (j == NUM\_PARTITIONS)

{

printf("Process %d (size %d KB) cannot be allocated\n", i + 1, processes[i]);

}

}

printf("Final memory partitions:\n");

for (int i = 0; i < NUM\_PARTITIONS; i++)

{

printf("%d KB ", partitions[i]);

}

printf("\n");

return 0;

}

