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CLASS/BATCH : TE-B-2
ROLL NO : 46

Practical No:-05
Write a program to simulate Memory placement strategies – best fit, first fit, and next fit and worst fit.

// FIRST FIT

```
export java.util.Scanner;

public class
FirstFitMemoryAllocation {
public static void main(String[]
args) {         Scanner sc = new
Scanner(System.in);

        // Input memory blocks
System.out.print("Enter number of memory
blocks: ");         int m = sc.nextInt();
int blockSize[] = new int[m];
System.out.println("Enter sizes of each memory
block:");         for (int i = 0; i < m; i++)
{             blockSize[i] = sc.nextInt();
}

        // Input processes
System.out.print("Enter number of
processes: ");         int n =
sc.nextInt();         int processSize[] =
new int[n];
System.out.println("Enter sizes of each
process:");         for (int i = 0; i < n;
i++) {             processSize[i] =
sc.nextInt();         }

        // Array to store block allocation
for each process         int allocation[] =
new int[n];         for (int i = 0; i < n;
i++) {             allocation[i] = -1; // -
1 means not allocated         }

        // First Fit Allocation
for (int i = 0; i < n; i++) { // process
loop             for (int j = 0; j < m;
j++) { // block loop                 if
(blockSize[j] >= processSize[i]) {
allocation[i] = j;
blockSize[j] -= processSize[i];
break; // Move to next process
}
```

```
            }
        }

        // Output results
System.out.println("\nProcess No.\tProcess
Size\tBlock No.");         for (int i = 0; i < n;
i++) {             System.out.print((i + 1) + "\t\t"
+ processSize[i] + "\t\t");             if
(allocation[i] != -1)
System.out.println(allocation[i] + 1);
else                 System.out.println("Not
Allocated");         }


sc.close();
}
}
```

Input:

```
Enter number of memory
blocks: 5 Enter sizes of
each memory block:
100 500 200 300 600
Enter number of
processes: 4 Enter
sizes of each process:
212 417 112 426
```

Output:

```
Process No.    Process Size    Block No.
1               212            2
2               417            5
3               112            2
4               426            Not Allocated
```