**Practical Assignment 9:**

**Write a Program to simulate Memory placement strategies – best fit, first fit, next fit**

**and worst fit.**

// Java implementation of First - Fit algorithm

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class GFG

{

// Method to allocate memory to

// blocks as per First fit algorithm

static void firstFit(int blockSize[], int m,

int processSize[], int n)

{

// Stores block id of the

// block allocated to a process

int allocation[] = new int[n];

// Initially no block is assigned to any process

for (int i = 0; i < allocation.length; i++)

allocation[i] = -1;

// pick each process and find suitable blocks

// according to its size ad assign to it

for (int i = 0; i < n; i++)

{

for (int j = 0; j < m; j++)

{

if (blockSize[j] >= processSize[i])

{

// allocate block j to p[i] process

allocation[i] = j;

// Reduce available memory in this block.

blockSize[j] -= processSize[i];

break;

}

}

}

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.print(allocation[i] + 1);

else

System.out.print("Not Allocated");

System.out.println();

}

}

// Driver Code

public static void main(String[] args)

{

int blockSize[] = {100, 500, 200, 300, 600};

int processSize[] = {212, 417, 112, 426};

int m = blockSize.length;

int n = processSize.length;

firstFit(blockSize, m, processSize, n);

}

}

**OUTPUT:**

****