BestFit

```
import java.util.Scanner;

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


        System.out.print("Enter the number of memory blocks: ");
        int numBlocks = scanner.nextInt();
        int[] memoryBlocks = new int[numBlocks];
        boolean[] isBlockUsed = new boolean[numBlocks];


        System.out.println("Enter the size of each memory block:");
        for (int i = 0; i < numBlocks; i++) {
            memoryBlocks[i] = scanner.nextInt();
        }


        System.out.print("Enter the number of processes: ");
        int numProcesses = scanner.nextInt();
        int[] processSizes = new int[numProcesses];


        System.out.println("Enter the size of each process:");
        for (int i = 0; i < numProcesses; i++) {
            processSizes[i] = scanner.nextInt();
        }


        for (int i = 0; i < numProcesses; i++) {
```

```
        int bestIndex = -1;
        for (int j = 0; j < numBlocks; j++) {

            if (!isBlockUsed[j] && memoryBlocks[j] >= processSizes[i]) {
                if (bestIndex == -1 || memoryBlocks[bestIndex] > memoryBlocks[j]) {
                    bestIndex = j;
                }
            }
        }

        if (bestIndex != -1) {
            System.out.println("Process " + (i + 1) + " of size " + processSizes[i] + " allocated to block " +
(bestIndex + 1));
            memoryBlocks[bestIndex] -= processSizes[i];
            isBlockUsed[bestIndex] = true;
        } else {
            System.out.println("Process " + (i + 1) + " of size " + processSizes[i] + " could not be
allocated.");
        }
      }

      scanner.close();
   }
}
```

//output-

Enter the number of memory blocks: 5

Enter the size of each memory block:

200

100

300

400

250

Enter the number of processes: 4

Enter the size of each process:

212

125

50

80

Process 1 of size 212 allocated to block 5

Process 2 of size 125 allocated to block 1

Process 3 of size 50 allocated to block 2

Process 4 of size 80 allocated to block 3