

```

import java.util.Scanner;

public class FirstFit {

    // Function to implement the First Fit algorithm
    public static void firstFit(int[] items, int binCapacity) {
        int binCount = 0; // Track the number of bins used
        int[] bins = new int[items.length]; // Array to store current weights of each bin

        System.out.println("Packing the items using First Fit Algorithm:");

        for (int i = 0; i < items.length; i++) {
            boolean placed = false;

            // Try to place the item in the first available bin
            for (int j = 0; j < binCount; j++) {
                if (bins[j] + items[i] <= binCapacity) {
                    bins[j] += items[i];

                    System.out.println("Item " + (i + 1) + " (Weight: " + items[i] + ") placed in Bin " + (j + 1));

                    placed = true;
                    break;
                }
            }

            // If item wasn't placed, open a new bin
            if (!placed) {
                bins[binCount] = items[i];
                binCount++;

                System.out.println("Item " + (i + 1) + " (Weight: " + items[i] + ") placed in Bin " + binCount);
            }
        }
    }
}

```

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    }  
}  
  
    System.out.println("\nTotal number of bins used: " + binCount);  
}
```

```
public static void main(String[] args) {  
    Scanner scanner = new Scanner(System.in);  
  
    // Get the number of items  
    System.out.print("Enter the number of items: ");  
    int n = scanner.nextInt();  
  
    // Get the bin capacity  
    System.out.print("Enter the bin capacity: ");  
    int binCapacity = scanner.nextInt();  
  
    // Get the weight of each item  
    int[] items = new int[n];  
    System.out.println("Enter the weights of the items:");  
    for (int i = 0; i < n; i++) {  
        items[i] = scanner.nextInt();  
    }  
  
    // Call the first fit function  
    firstFit(items, binCapacity);  
  
    scanner.close();  
}
```

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}
```

```
java -cp /tmp/r8derekDtL/FirstFit
```

```
Enter the number of items: 3
```

```
Enter the bin capacity: 3
```

```
Enter the weights of the items:
```

```
2
```

```
5
```

```
3
```

```
Packing the items using First Fit Algorithm:
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```
Item 1 (Weight: 2) placed in Bin 1
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```
Item 2 (Weight: 5) placed in Bin 2
```

```
Item 3 (Weight: 3) placed in Bin 3
```

```
Total number of bins used: 3
```

```
=== Code Execution Successful ===
```