Expr 10 a: Best Fit

First Fit code:

```
#include &lt;stdio.h&gt;
#define MAX 10

int main() {
int blockSize[MAX], fileSize[MAX], allocation[MAX], originalBlockSize[MAX];
int blockCount, fileCount, fragment[MAX];

// Input number of blocks and files
printf(&quot;Enter the no of blocks: &quot;);
scanf(&quot;%d&quot;, &amp;blockCount);
printf(&quot;Enter the no of files: &quot;);
scanf(&quot;%d&quot;, &amp;fileCount);

// Input block sizes
printf(&quot;Enter the size of the blocks:\n&quot;);
for (int i = 0; i &lt; blockCount; i++) {
printf(&quot;Block %d: &quot;, i + 1);
scanf(&quot;%d&quot;, &amp;blockSize[i]);
originalBlockSize[i] = blockSize[i]; // Keep original size for output
}

// Input file sizes

printf(&quot;Enter the size of the files:\n&quot;);
for (int i = 0; i &lt; fileCount; i++) {
printf(&quot;File %d: &quot;, i + 1);
scanf(&quot;%d&quot;, &amp;fileSize[i]);
allocation[i] = -1; // Initially not allocated
fragment[i] = -1; // Initially no fragment
}

// First Fit Allocation
for (int i = 0; i &lt; fileCount; i++) {
for (int j = 0; j &lt; blockCount; j++) {
if (blockSize[j] &gt;= fileSize[i]) {
allocation[i] = j;
fragment[i] = blockSize[j] - fileSize[i];
blockSize[j] -= fileSize[i]; // Update available size
break;
}
}
}

// Final output
printf(&quot;\nFile No\tFile Size\tBlock No\tBlock Size\tFragment\n&quot;);
```

```
for (int i = 0; i &lt; fileCount; i++) {
printf(&quot;%d\t%d\t\t&quot;, i + 1, fileSize[i]);
if (allocation[i] != -1) {
int b = allocation[i];
printf(&quot;%d\t\t%d\t\t%d\n&quot;, b + 1, originalBlockSize[b],
fragment[i]);

} else {
printf(&quot;Not Allocated\t-\t\t-\n&quot;);
}
}

return 0;
}
```

Output:

```
kfl02@fedora:~/exp10b$ ./first_fit
Enter the no of blocks: 4
Enter the no of files: 3
Enter the size of the blocks:
Block 1: 5
Block 2: 8
Block 3: 4
Block 4: 10
Enter the size of the files:
File 1: 1
File 2: 4
File 3: 7

File No File Size       Block No        Block Size      Fragment
1       1               1               5               4
2       4               1               5               0
3       7               2               8               1
kfl02@fedora:~/exp10b$
```

Result:

Thus the First fit Code is implemented in fedora using the c language