BEST FIT

Program :

```
#include <stdio.h>
#define max 25
void main() {
    int frag[max], b[max], f[max], i, j, nb, nf;
    static int bf[max], ff[max];

    printf("\nMemory Management Scheme - Best Fit");
    printf("\nEnter the number of blocks: ");
    scanf("%d", &nb);

    printf("\nEnter the size of the blocks:\n");
    for (i = 1; i <= nb; i++) {
        printf("Block %d: ", i);
        scanf("%d", &b[i]);
    }

    printf("\nEnter the number of files: ");
    scanf("%d", &nf);
    printf("\nEnter the size of the files:\n");
    for (i = 1; i <= nf; i++) {
        printf("File %d: ", i);
        scanf("%d", &f[i]);
    }

    for (i = 1; i <= nf; i++) {
        int min_frag = max;
        int best_fit_block = -1;
        for (j = 1; j <= nb; j++) {
            if (bf[j] != 1 && b[j] >= f[i]) {
                int frag_size = b[j] - f[i];
                if (frag_size < min_frag) {
                    min_frag = frag_size;
                    best_fit_block = j;
                }
            }
        }

        if (best_fit_block != -1) {
            ff[i] = best_fit_block;
            bf[best_fit_block] = 1;
            frag[i] = min_frag;
        }
    }

    printf("\nFile No.\tFile Size\tBlock No.\tBlock Size\tFragment");
    for (i = 1; i <= nf; i++) {
        printf("\n%d\t\t%d\t\t%d\t\t%d\t\t%d", i, f[i], ff[i], b[ff[i]], frag[i]);
    }
}
```