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CS 100 Exam 3

What is the output of the C program shown below when run with the command `./a.out BBACA AU RMONSIC DTIE 010`

```
#include <stdio.h>
#include <string.h>

int main(int argc, char *argv[]) {
    for (int a=1; a<argc; a++) {
        int len = strlen(argv[a]) - 1;
        int x = 0, y = len;
        while (x <= y) {
            if (x == y)
                printf("%c", argv[a][x]);
            else
                printf("%c%c", argv[a][y], argv[a][x]);
            x = x + 1;
            y = y - 1;
        }
        printf("\n");
    }
    return 0;
}
```

What is the output of the C program below when run with the command `./a.out DATA`

```
#include <stdio.h>
#include <stdlib.h>
int main(int argc, char *argv[]) {
    FILE *fp = fopen(argv[1], "r");
    int num, data[5] = { 0 };
    fscanf(fp, "%d", &num);
    while ( !feof(fp) ) {
        if (num > 156) data[4]++;
        else if (num > 129) data[3]++;
        else if (num > 110) data[2]++;
        else if (num > 95) data[1]++;
        else if (num > 74) data[0]++;
        fscanf(fp, "%d", &num);
    }
    for (int a=0; a<5; a++) {
        printf("%d : ", a+1);
        for (int b=0; b<data[a]; b++)
            printf("X");
        printf("\n");
    }
    return 0;
}
```

DATA

160  
80  
55  
135  
145  
175  
90  
95  
115  
125  
85  
140