Lab Assignment 1

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**CODE**

#include <stdio.h>

#include <stdlib.h>

#include <time.h>

int main(){

clock\_t begin = clock();

int searchResult = 0;

int searchKey = 0;

char \* line = NULL;

size\_t len = 0;

ssize\_t read = 0;

char fileName[25];

printf("Enter a fileName to open:\n");

scanf("%s",fileName);

printf("Enter a number to be searched:\n");

scanf("%d",&searchKey);

FILE \*fp = fopen(fileName,"r");

while((read = getline(&line,&len,fp))!= -1 && searchResult == 0){

if(searchKey == atoi(line)){

printf("FOUND!");

searchResult = 1 ;

}

}

clock\_t end = clock();

double time\_spent = (double)(end - begin) / CLOCKS\_PER\_SEC;

printf("Execution Time: %f\n",time\_spent);

close(fp);

}

#include<stdio.h>

#include<stdlib.h>

int main()

{

/\* code \*/

increasing\_file();

decreasing\_file();

random1\_file();

random2\_file();

return 0;

}

int increasing\_file(){

FILE \*fp = fopen("increasing\_file.txt","w");

int i,j;

for(i=0;i<=1000;i++){

for(j=0;j<=1000;j++){

fprintf(fp, "%d\n",i );

}

}

fclose(fp);

return 0;

}

int decreasing\_file(){

FILE \*f = fopen("decreasing\_file.txt","w");

int i,j;

for(i=1000;i>=0;i--){

for(j=0;j<=1000;j++){

fprintf(f, "%d\n", i);

}

}

fclose(f);

return 0;

}

int random1\_file(){

FILE \*fp = fopen("random1\_file.txt","w");

int i,j;

for(j=0;j<=1000000;j++){

fprintf(fp, "%d\n",rand()%1000);

}

fclose(fp);

return 0;

}

int random2\_file(){

FILE \*fp = fopen("random2\_file.txt","w");

int i,j;

long val;

for(j=1;j<=1000000;j++){

val = (long) (1000000 +rand() % 1000000000);

fprintf(fp, "%d\n",val);

}

fclose(fp);

return 0;

}

**Observations**

