Programming Problems 2.15

Instruction & Output:

make

```
cskt@cskt-VirtualBox:~/Desktop/os_linux/2.15$ make
gcc -o copyfile.o copyfile.c
```

strace ./copyfile.o

Input file name

in.txt

out.txt



Other test:

./copyfile.o

```
please enter the name of input file : in2.txt
please enter the name of output file : out.txt
input file does not exist!
cskt@cskt-VirtualBox:~/Desktop/os_linux/2.15$
```

If input file does not exist, abort

```
cskt@cskt-VirtualBox:~/Desktop/os_linux/2.15$ ./copyfile.o
please enter the name of input file : in.txt
please enter the name of output file : out.txt
output file exists!
cskt@cskt-VirtualBox:~/Desktop/os_linux/2.15$
```

If output file exist, abort

```
cskt@cskt-VirtualBox:~/Desktop/os_linux/2.15$ ./copyfile.o
please enter the name of input file : in.txt
please enter the name of output file : out2.txt
content successfully copied to output file
cskt@cskt-VirtualBox:~/Desktop/os_linux/2.15$
```

Otherwise, create a new output file read and write the content from the input file to output file

Source code:

Aquire input & output file name.

If input file does not exists or output file exists, abort

```
FILE *tmpptr; // use to check if file exists char in_file[100], out_file[100]; // file name
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                   // aquire input file name
                  printf("please enter the name of input file : ");
scanf("%s", in_file);
// aquire chart file name
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                   // addition output file name of output file : ");
scanf("%s", out_file);
// check if input file exists
if( (tmpptr=fopen(in_file, "r")) == NULL){
    printf("input file does not exist!\n");
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                            exit(0);
 38
                   // check if output file exists
if( (tmpptr=fopen(out_file, "r")) != NULL){
    printf("output file exists!\n");
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                            exit(0);
```

Otherwise, open the input file to read and write the content to output file If success, write completion message to screen

```
copy_content(in_file, out_file);
return 0;
```

```
void copy_content(char *in_file, char *out_file){
    int ch; // store char that move from input file to output file
    FILE *inptr = fopen(in_file, "r");
    if(!inptr){
        printf("cannot open input file!\n");
        exit(0);
    }
    FILE *outptr = fopen(out_file, "w");
    if(!outptr){
        printf("cannot open output file!\n");
        exit(0);
}

while((ch = fgetc(inptr)) != EOF){ // read from input file and write to output file fputc(ch, outptr);
    }
fclose(inptr);
fclose(outptr);
printf("content successfully copied to output file\n");
}
```