File I/O

```
#include <stdio.h>

int main(void)
{









    return 0;
}
```

```
#include <stdio.h>

int main(void)
{

    /* create a new file */




    return 0;
}
```

```
#include <stdio.h>

int main(void)
{

    /* create a new file */
         fopen(                    )









    return 0;
}
```

```
#include <stdio.h>

int main(void)
{

    /* arguments -  */
         fopen(                  )









    return 0;
}
```

```
#include <stdio.h>

int main(void)
{

    /* arguments - file name */
        fopen(                  )









    return 0;
}
```

```
#include <stdio.h>

int main(void)
{

    /* arguments - file name */
         fopen("test.txt"     )




    return 0;
}
```

```
#include <stdio.h>

int main(void)
{

    /* arguments - what to do?  */
         fopen("test.txt"     )




    return 0;
}
```

```
#include <stdio.h>

int main(void)
{

    /* arguments - what to do?  :  write - ‘‘w’’ */
         fopen("test.txt", "w")




    return 0;
}
```

```
#include <stdio.h>

int main(void)
{

    /* return type -  */
         fopen("test.txt", "w")




    return 0;
}
```

```
#include <stdio.h>

int main(void)
{

    /* return type - pointer to file */
         fopen("test.txt", "w")




    return 0;
}
```

```
#include <stdio.h>

int main(void)
{
    FILE *fp;

    /* return type - pointer to file */
         fopen("test.txt", "w")




    return 0;
}
```

```
#include <stdio.h>

int main(void)
{
    FILE *fp;

    /* return type - pointer to file */
    fp = fopen("test.txt", "w");




    return 0;
}
```

File I/O

```
#include <stdio.h>

int main(void)
{
    FILE *fp;

    /* return type - pointer to file */
    fp = fopen("test.txt", "w");

    /* print to file */




    return 0;
}
```

File I/O

```
#include <stdio.h>

int main(void)
{
    FILE *fp;

    /* return type - pointer to file */
    fp = fopen("test.txt", "w");

    /* print to file */
    fprintf(                        );



    return 0;
}
```

```
#include <stdio.h>

int main(void)
{
    FILE *fp;

    /* return type - pointer to file */
    fp = fopen("test.txt", "w");

    /* where to write?  */
    fprintf(                        );



    return 0;
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int main(void)
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    fprintf(fp                    );



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int main(void)
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    /* what to write?  */
    fprintf(fp, "hello, world!\n");



    return 0;
}
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#include <stdio.h>

int main(void)
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    FILE *fp;

    /* return type - pointer to file */
    fp = fopen("test.txt", "w");

    /* what to write?  */
    fprintf(fp, "hello, world!\n");

    /* close file when done */


    return 0;
}
```

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int main(void)
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    FILE *fp;

    /* return type - pointer to file */
    fp = fopen("test.txt", "w");

    /* what to write?  */
    fprintf(fp, "hello, world!\n");

    /* close file when done */
    fclose(  );

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    fp = fopen("test.txt", "w");

    /* what to write?  */
    fprintf(fp, "hello, world!\n");

    /* close file when done */
    fclose(fp);

    return 0;
}
```

File I/O

– *Read* `test.txt`

File I/O

– *Read* `test.txt`

```
#include <stdio.h>

int main(void)
{









    return 0;
}
```

File I/O

– *Read* `test.txt`

```
#include <stdio.h>

int main(void)
{

    /* open test.txt */









    return 0;
}
```

File I/O

– *Read* `test.txt`

```
#include <stdio.h>

int main(void)
{

    /* open test.txt */
        fopen(                  )









    return 0;
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```

File I/O

– *Read* `test.txt`

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#include <stdio.h>

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File I/O

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int main(void)
{

    /* arguments - file name */
        fopen("test.txt"     )









    return 0;
}
```

File I/O

– *Read* `test.txt`

```
#include <stdio.h>

int main(void)
{

    /* arguments - what to do?  */
         fopen("test.txt"     )









    return 0;
}
```

File I/O

– *Read* `test.txt`

```
#include <stdio.h>

int main(void)
{

    /* arguments - what to do?  :  read - ‘‘r’’ */
        fopen("test.txt", "r")




    return 0;
}
```

File I/O

– *Read* `test.txt`

```
#include <stdio.h>

int main(void)
{

    /* return type -  */
        fopen("test.txt", "r")




    return 0;
}
```

File I/O

– *Read* `test.txt`

```
#include <stdio.h>

int main(void)
{

    /* return type - pointer to file */
        fopen("test.txt", "r")









    return 0;
}
```

File I/O

– *Read* `test.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp;

    /* return type - pointer to file */
        fopen("test.txt", "r")









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File I/O

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```
#include <stdio.h>

int main(void)
{
    FILE *fp;

    /* return type - pointer to file */
    fp = fopen("test.txt", "r");









    return 0;
}
```

File I/O

– *Read* `test.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp;

    /* return type - pointer to file */
    fp = fopen("test.txt", "r");

    /* read from file */




    return 0;
}
```

File I/O

– *Read* `test.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp;

    /* return type - pointer to file */
    fp = fopen("test.txt", "r");

    /* read from file */
    fscanf(                );




    return 0;
}
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File I/O

– *Read* `test.txt`

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    fscanf(fp           );




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int main(void)
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    fp = fopen("test.txt", "r");

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    fscanf(fp           );




    return 0;
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File I/O

– *Read* `test.txt`

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#include <stdio.h>

int main(void)
{
    FILE *fp;

    /* return type - pointer to file */
    fp = fopen("test.txt", "r");

    /* how to read?  */
    fscanf(fp, "%s", str);




    return 0;
}
```

File I/O

– *Read* `test.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp;

    /* return type - pointer to file */
    fp = fopen("test.txt", "r");

    /* how to read?  */
     scanf(    "%s", str);




    return 0;
}
```

File I/O

– *Read* `test.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp;

    /* return type - pointer to file */
    fp = fopen("test.txt", "r");

    /* how to read?  */
    fscanf(fp, "%s", str);




    return 0;
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    fp = fopen("test.txt", "r");

    /* how to read?  */
    fscanf(fp, "%s", str);
    printf("%s\n", str);



    return 0;
}
```

File I/O

– *Read* `test.txt`

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#include <stdio.h>

int main(void)
{
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    /* return type - pointer to file */
    fp = fopen("test.txt", "r");

    /* how to read?  */
    fscanf(fp, "%s", str);
    printf("%s\n", str);

    /* close file when done */


    return 0;
}
```

File I/O

– *Read* `test.txt`

```
#include <stdio.h>

int main(void)
{
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    /* return type - pointer to file */
    fp = fopen("test.txt", "r");

    /* how to read?  */
    fscanf(fp, "%s", str);
    printf("%s\n", str);

    /* close file when done */
    fclose(  );

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File I/O

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File I/O

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    /* close file when done */
    fclose(fp);

    return 0;
}
```

```
$
```

File I/O

– *Read* `test.txt`

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#include <stdio.h>

int main(void)
{
    FILE *fp;

    /* return type - pointer to file */
    fp = fopen("test.txt", "r");

    /* how to read?  */
    fscanf(fp, "%s", str);
    printf("%s\n", str);

    /* close file when done */
    fclose(fp);

    return 0;
}
```

```
$ ./a.out ↵
```

File I/O

– *Read* `test.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp;

    /* return type - pointer to file */
    fp = fopen("test.txt", "r");

    /* how to read?  */
    fscanf(fp, "%s", str);
    printf("%s\n", str);

    /* close file when done */
    fclose(fp);

    return 0;
}
```

```
$ ./a.out ↵
hello,
$
```

File I/O

– *Read* `test.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp;

    /* return type - pointer to file */
    fp = fopen("test.txt", "r");

    /* how to read?  */
    fscanf(fp, "%[^\n]s", str);
    printf("%s\n", str);

    /* close file when done */
    fclose(fp);

    return 0;
}
```

```
$
```

File I/O

– *Read* `test.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp;

    /* return type - pointer to file */
    fp = fopen("test.txt", "r");

    /* how to read?  */
    fscanf(fp, "%[^\n]s", str);
    printf("%s\n", str);

    /* close file when done */
    fclose(fp);

    return 0;
}
```

```
$ ./a.out ↵
```

File I/O

– *Read* `test.txt`

```c
#include <stdio.h>

int main(void)
{
    FILE *fp;

    /* return type - pointer to file */
    fp = fopen("test.txt", "r");

    /* how to read?  */
    fscanf(fp, "%[^\n]s", str);
    printf("%s\n", str);

    /* close file when done */
    fclose(fp);

    return 0;
}
```

```
$ ./a.out ↵
hello, world!
$
```

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{

    return 0;
}
```

File I/O

– *Copy* `test.txt` *to* `hello.txt`

File I/O

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{
    /* open test.txt to read */









    return 0;
}
```

File I/O

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{

    /* open test.txt to read */
        fopen(                    )

    return 0;
}
```

File I/O

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{

    /* text.txt :  arguments -  */
         fopen(                  )









    return 0;
}
```

File I/O

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{

    /* text.txt :  arguments - file name, mode */
        fopen(                    )









    return 0;
}
```

File I/O

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{

    /* text.txt :  arguments - file name, mode */
         fopen("test.txt"     )









    return 0;
}
```

File I/O

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{

    /* text.txt :  arguments - file name, mode */
         fopen("test.txt", "r")

    return 0;
}
```

File I/O

– *Copy* `test.txt` *to* `hello.txt`

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#include <stdio.h>

int main(void)
{

    /* text.txt :  return type -  */
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    return 0;
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File I/O

– *Copy* `test.txt` *to* `hello.txt`

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– *Copy* `test.txt` *to* `hello.txt`

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int main(void)
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int main(void)
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    fp = fopen("test.txt", "r");









    return 0;
}
```

File I/O

– *Copy* `test.txt` *to* `hello.txt`

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    /* text.txt */
    fp = fopen("test.txt", "r");









    return 0;
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```

File I/O

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp;


    /* text.txt */
    fp = fopen("test.txt", "r");

    /* open hello.txt to write */









    return 0;
}
```

File I/O

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp;


    /* text.txt */
    fp = fopen("test.txt", "r");

    /* open hello.txt to write */
        fopen(                    )









    return 0;
}
```

File I/O

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp;


    /* text.txt */
    fp = fopen("test.txt", "r");

    /* hello.txt :  arguments -  */
        fopen(                  )









    return 0;
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File I/O

– *Copy* `test.txt` *to* `hello.txt`

```
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File I/O

– *Copy* `test.txt` *to* `hello.txt`

```
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    FILE *fp;


    /* text.txt */
    fp = fopen("test.txt", "r");

    /* hello.txt :  arguments - file name, mode */
        fopen("hello.txt"     )









    return 0;
}
```

File I/O

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp;


    /* text.txt */
    fp = fopen("test.txt", "r");

    /* hello.txt :  arguments - file name, mode */
        fopen("hello.txt", "w")









    return 0;
}
```

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp;


    /* text.txt */
    fp = fopen("test.txt", "r");

    /* hello.txt :  return type -  */
        fopen("hello.txt", "w")









    return 0;
}
```

File I/O

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp;


    /* text.txt */
    fp = fopen("test.txt", "r");

    /* hello.txt :  return type - pointer to file */
        fopen("hello.txt", "w")









    return 0;
}
```

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp, *a;


    /* text.txt */
    fp = fopen("test.txt", "r");

    /* hello.txt :  return type - pointer to file */
        fopen("hello.txt", "w")









    return 0;
}
```

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp, *a;


    /* text.txt */
    fp = fopen("test.txt", "r");

    /* hello.txt :  return type - pointer to file */
    a = fopen("hello.txt", "w");









    return 0;
}
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– *Copy* `test.txt` *to* `hello.txt`

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#include <stdio.h>

int main(void)
{
    FILE *fp, *a;


    /* text.txt */
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    /* hello.txt */
    a = fopen("hello.txt", "w");









    return 0;
}
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File I/O

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp, *a;


    /* text.txt */
    fp = fopen("test.txt", "r");

    /* hello.txt */
    a = fopen("hello.txt", "w");

    /* read from ‘fp’ and write to ‘a’ */









    return 0;
}
```

File I/O

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp, *a;


    /* text.txt */
    fp = fopen("test.txt", "r");

    /* hello.txt */
    a = fopen("hello.txt", "w");

    /* read from ‘fp’ and write to ‘a’ */

                getc(  )









    return 0;
}
```

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp, *a;


    /* text.txt */
    fp = fopen("test.txt", "r");

    /* hello.txt */
    a = fopen("hello.txt", "w");

    /* read from ‘fp’ and write to ‘a’ */
    /* read character from a file */
                getc(  )




    return 0;
}
```

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp, *a;


    /* text.txt */
    fp = fopen("test.txt", "r");

    /* hello.txt */
    a = fopen("hello.txt", "w");

    /* read from ‘fp’ and write to ‘a’ */
    /* read character from a file */
                getc(fp)




    return 0;
}
```

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp, *a;


    /* text.txt */
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    /* hello.txt */
    a = fopen("hello.txt", "w");

    /* read from ‘fp’ and write to ‘a’ */
    /* read character from a file */
          c = getc(fp)




    return 0;
}
```

– *Copy* `test.txt` *to* `hello.txt`

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#include <stdio.h>

int main(void)
{
    FILE *fp, *a;
    int c;

    /* text.txt */
    fp = fopen("test.txt", "r");

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    a = fopen("hello.txt", "w");

    /* read from ‘fp’ and write to ‘a’ */
    /* read character from a file */
          c = getc(fp)




    return 0;
}
```

– *Copy* `test.txt` *to* `hello.txt`

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#include <stdio.h>

int main(void)
{
    FILE *fp, *a;
    int c;

    /* text.txt */
    fp = fopen("test.txt", "r");

    /* hello.txt */
    a = fopen("hello.txt", "w");

    /* read from ‘fp’ and write to ‘a’ */
    /* read character from a file */
    while((c = getc(fp)) != EOF)




    return 0;
}
```

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp, *a;
    int c;

    /* text.txt */
    fp = fopen("test.txt", "r");

    /* hello.txt */
    a = fopen("hello.txt", "w");

    /* read from ‘fp’ and write to ‘a’ */
    /* read character from a file */
    while((c = getc(fp)) != EOF)
        putc(c, a);



    return 0;
}
```

– *Copy* `test.txt` *to* `hello.txt`

```
#include <stdio.h>

int main(void)
{
    FILE *fp, *a;
    int c;

    /* text.txt */
    fp = fopen("test.txt", "r");

    /* hello.txt */
    a = fopen("hello.txt", "w");

    /* read from ‘fp’ and write to ‘a’ */
    /* read character from a file */
    while((c = getc(fp)) != EOF)
        putc(c, a);

    /* close the files */


    return 0;
}
```

– *Copy* test.txt *to* hello.txt

```
#include <stdio.h>

int main(void)
{
    FILE *fp, *a;
    int c;

    /* text.txt */
    fp = fopen("test.txt", "r");

    /* hello.txt */
    a = fopen("hello.txt", "w");

    /* read from ‘fp’ and write to ‘a’ */
    /* read character from a file */
    while((c = getc(fp)) != EOF)
        putc(c, a);

    /* close the files */
    fclose(fp);
    fclose(a);
    return 0;
}
```