## C Cheat Sheet: stdio.h Functions

Quick reference for standard I/O functions in C

### **Input Functions**

```
scanf()
               - Reads formatted input from stdin
fscanf()
               - Reads formatted input from a FILE*
sscanf()
              - Reads formatted input from a string
getchar()
               - Reads a single character from stdin
               - Reads a string from stdin (deprecated)
gets()
               - Reads a string from a FILE*
fgets()
              - Reads a character from a FILE*
getc()
fgetc()
               - Reads a character from a FILE*
ungetc()
               - Pushes a character back to input stream
```

#### **Output Functions**

```
printf()
               - Writes formatted output to stdout
fprintf()
              - Writes formatted output to a FILE*
sprintf()
              - Writes formatted output to a string
              - Safe version of sprintf()
snprintf()
putchar()
              - Writes a single character to stdout
               - Writes a string to stdout with newline
puts()
fputs()
              - Writes a string to a FILE*
               - Writes a character to a FILE*
putc()
fputc()
               - Writes a character to a FILE*
```

## **File Handling Functions**

```
fopen() - Opens a file
freopen() - Reopens a file with a new stream
fclose() - Closes a file
fflush() - Flushes the output buffer
```

#### **File Positioning Functions**

fseek()	- Moves file pointer to a given position
ftell()	- Returns current file pointer position
rewind()	- Resets file pointer to beginning
fgetpos()	- Gets current position into a variable
fsetpos()	- Sets file position using fpos_t

#### **Binary I/O Functions**

```
fread() - Reads binary data from a file
fwrite() - Writes binary data to a file
```

## **Error Handling Functions**

```
perror() - Prints descriptive error message
clearerr() - Clears error and EOF indicators
feof() - Checks for end-of-file
ferror() - Checks for file error
```

#### **Temporary File Functions**

```
tmpfile() - Creates a temporary file
tmpnam() - Generates a unique temporary filename
```

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## **Standard Streams**

stdin - Standard input stream stdout - Standard output stream stderr - Standard error stream