**Important Built-in Functions in Java for Placements**

**1. String Methods (java.lang.String)**

* length() – Returns the length of the string.
* charAt(index) – Returns the character at the specified index.
* substring(start, end) – Extracts a substring from a string.
* toLowerCase() – Converts the string to lowercase.
* toUpperCase() – Converts the string to uppercase.
* trim() – Removes leading and trailing spaces.
* replace(oldChar, newChar) – Replaces occurrences of a character.
* replaceAll(regex, replacement) – Replaces all substrings matching the regex.
* split(regex) – Splits the string based on a regex pattern.
* equals(str) – Checks if two strings are equal.
* equalsIgnoreCase(str) – Compares two strings, ignoring case differences.
* startsWith(prefix) – Checks if the string starts with the specified prefix.
* endsWith(suffix) – Checks if the string ends with the specified suffix.
* contains(sequence) – Checks if the string contains a given sequence.
* indexOf(ch) – Returns the index of the first occurrence of a character.
* lastIndexOf(ch) – Returns the last occurrence of a character.

**2. Math Methods (java.lang.Math)**

* max(a, b) – Returns the maximum of two values.
* min(a, b) – Returns the minimum of two values.
* sqrt(x) – Returns the square root of a number.
* pow(a, b) – Returns a raised to the power of b.
* abs(x) – Returns the absolute value of a number.
* random() – Returns a random number between 0.0 and 1.0.
* ceil(x) – Rounds a number up to the nearest integer.
* floor(x) – Rounds a number down to the nearest integer.
* round(x) – Rounds a floating-point number to the nearest integer.
* log(x) – Returns the natural logarithm of a number.
* sin(x), cos(x), tan(x) – Trigonometric functions.

**3. Arrays Methods (java.util.Arrays)**

* sort(arr) – Sorts an array in ascending order.
* binarySearch(arr, key) – Searches for a key in a sorted array using binary search.
* copyOf(arr, newLength) – Copies an array into a new one with the specified length.
* fill(arr, value) – Fills the array with a specified value.
* equals(arr1, arr2) – Checks if two arrays are equal.
* asList(arr) – Converts an array into a List.

**4. Collections Methods (java.util.Collections)**

* sort(list) – Sorts a list in ascending order.
* reverse(list) – Reverses the elements of a list.
* shuffle(list) – Randomly shuffles elements in a list.
* max(list) – Returns the maximum element in a collection.
* min(list) – Returns the minimum element in a collection.
* frequency(collection, item) – Counts occurrences of an item in a collection.
* swap(list, i, j) – Swaps two elements in a list.

**5. File Handling Methods (java.io.File)**

* createNewFile() – Creates a new file.
* exists() – Checks if the file exists.
* delete() – Deletes a file.
* getName() – Returns the name of the file.
* getAbsolutePath() – Returns the absolute file path.
* length() – Returns the file size in bytes.

**6. Input/Output Methods (java.io package)**

* read() – Reads a single byte or character.
* readLine() – Reads an entire line.
* write() – Writes a byte or character.
* flush() – Clears the output buffer.
* close() – Closes a file or stream.

**7. System Methods (java.lang.System)**

* exit(status) – Terminates the program.
* currentTimeMillis() – Returns the current time in milliseconds.
* nanoTime() – Returns the current value of the system timer in nanoseconds.
* arraycopy(src, srcPos, dest, destPos, length) – Copies an array.

**8. Threading Methods (java.lang.Thread)**

* start() – Starts a new thread.
* run() – Defines the code that runs in a thread.
* sleep(milliseconds) – Pauses execution for a given time.
* join() – Waits for the thread to finish.
* isAlive() – Checks if a thread is running.

**9. Wrapper Classes Methods (Integer, Double, Boolean, etc.)**

* parseInt(str) – Converts a string to an integer.
* parseDouble(str) – Converts a string to a double.
* valueOf(str) – Converts a string to a wrapper object.

**10. Exception Handling Methods (java.lang.Exception)**

* printStackTrace() – Prints details of an exception.
* getMessage() – Returns the error message.