Certainly! Here are some important pre-defined methods in C# categorized by common data types:

**### 1. Object**

- `Equals(object obj)`

- `GetHashCode()`

- `GetType()`

- `ToString()`

**### 2. String**

- `Length`

- `Contains(string value)`

- `StartsWith(string value)`

- `EndsWith(string value)`

- `IndexOf(char value)`

- `LastIndexOf(char value)`

- `Substring(int startIndex, int length)`

- `Replace(string oldValue, string newValue)`

- `ToUpper()`

- `ToLower()`

- `Trim()`

- `Split(char separator)`

**### 3. Array**

- `Length`

- `Rank`

- `GetValue(int index)`

- `SetValue(object value, int index)`

- `GetLength(int dimension)`

- `GetLowerBound(int dimension)`

- `GetUpperBound(int dimension)`

- `Clear(Array array, int index, int length)`

- `Copy(Array sourceArray, Array destinationArray, int length)`

- `Sort(Array array)`

**### 4. List<T>**

- `Add(T item)`

- `AddRange(IEnumerable<T> collection)`

- `Clear()`

- `Contains(T item)`

- `IndexOf(T item)`

- `Insert(int index, T item)`

- `Remove(T item)`

- `RemoveAt(int index)`

- `Sort()`

- `ToArray()`

**### 5. Dictionary<TKey, TValue>**

- `Add(TKey key, TValue value)`

- `ContainsKey(TKey key)`

- `ContainsValue(TValue value)`

- `Remove(TKey key)`

- `TryGetValue(TKey key, out TValue value)`

- `Clear()`

- `Keys`

- `Values`

**### 6. Int32**

- `CompareTo(int value)`

- `Equals(int value)`

- `GetHashCode()`

- `ToString()`

- `Parse(string s)`

- `TryParse(string s, out int result)`

**### 7. Double**

- `CompareTo(double value)`

- `Equals(double value)`

- `GetHashCode()`

- `ToString()`

- `Parse(string s)`

- `TryParse(string s, out double result)`

**### 8. DateTime**

- `AddDays(double value)`

- `AddHours(double value)`

- `AddMinutes(double value)`

- `AddSeconds(double value)`

- `AddMilliseconds(double value)`

- `AddTicks(long value)`

- `AddYears(int value)`

- `ToString()`

- `ToShortDateString()`

- `ToShortTimeString()`

- `ToLongDateString()`

- `ToLongTimeString()`

- `Compare(DateTime t1, DateTime t2)`

- `CompareTo(DateTime value)`

- `Equals(DateTime value)`

**### 9. TimeSpan**

- `Add(TimeSpan value)`

- `Subtract(TimeSpan value)`

- `Duration()`

- `Negate()`

- `TotalDays`

- `TotalHours`

- `TotalMinutes`

- `TotalSeconds`

- `TotalMilliseconds`

**### 10. Boolean**

- `ToString()`

- `Parse(string value)`

- `TryParse(string value, out bool result)`

**### 11. Enum**

- `GetName(Type enumType, object value)`

- `GetNames(Type enumType)`

- `GetValues(Type enumType)`

- `IsDefined(Type enumType, object value)`

- `Parse(Type enumType, string value)`

- `TryParse<TEnum>(string value, out TEnum result)`

**### 12. Guid**

- `ToString()`

- `Parse(string input)`

- `TryParse(string input, out Guid result)`

- `NewGuid()`

- `CompareTo(Guid value)`

- `Equals(Guid value)`

These methods are fundamental and are used extensively in various C# programming scenarios.