1.

1. telephone：ulong
2. height：byte（cm）
3. age： byte
4. gender： byte
5. salary： float
6. ISBN: String
7. Book Price: byte
8. Book shipping weight: sbyte
9. Population: uint
10. # of stars: ulong
11. # of employees: ushort

2. What are the difference between value type and reference type variables? What is boxing and unboxing?

1. Value type will hold the value, while reference type will hold memory address for its value;
2. Value types will be stored in stack memory, reference type will be stored in heap memory
3. Value type will not be collected by garbage collector, while reference type will be collected by garbage collector
4. Value type can be created by Struct or Enum, while reference type can be created by classes, interfaces, delegates, array
5. Value type cannot accept null values, but reference types can accept null values;

3. What is meant by the terms managed resource and unmanaged resource in .NET?

Managed resources are those that are pure .NET code and managed by the runtime and are under its direct control.

The term "unmanaged resource" is usually used to describe something not directly under the control of the garbage collector

Example:

using (var connection = new SqlConnection("connection\_string\_here"))

{

// Code to use connection here. }

4. What’s the purpose of Garbage Collector in .NET?

(The garbage collector manages the allocation and release of memory for an application.) For developers working with managed code, this means that you don't have to write code to perform memory management tasks. Automatic memory management can eliminate common problems, such as forgetting to free an object and causing a memory leak or attempting to access memory for an object that's already been freed.