

## Day 6 Project Assignment

By

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### 1) Disadvantages of ArrayList in Collections.

- A) a. We need to unbox the data everytime when we are compiling.  
b. There may be a chance of getting runtime error because the given data stores in the object datatype.
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### 2) Differences between Collections and Generic.

Collections	Generic
Namespace in collections is system.collections.	Namespace in Generic is system.collections.generic.
The datatype in collections is object datatype.	The datatype in Generic depends on the user which we choose.
In collections, we need type casting, where we need to convert datatype to our required datatype.	In generic, we need not to do type casting since we assign the required datatype at providing variables.
Eg: ArrayListdata = new ArrayList(); Int sum=0;  data.Add(5); data.Add(10);  foreach(var d in data) Sum=sum+(int)d;	Eg: List<int>data = newList<int>(); Int sum=0;  data. Add(5); data. Add(10);  foreach (var d in data) Sum=sum+d;

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### 3) Alias names of all datatypes.

Data type	Aliase name
byte	Byte
ushort	UInt16
uint	UInt32
ulong	UInt64
sbyte	SByte
short	Int16
int	Int32
long	Int64
float	Single
double	Double
decimal	Decimal
bool	Boolean
char	Char
string	String

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### 4) Research and find how the values of ArrayList are stored in the memory.

A) The values store in the ArrayList is in the sequential order. If the memory gets full the storing memory gets doubled and gets stored somewhere in the Heap memory.

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### 5) Research and find how the values of List<t> are stored in the memory.

A) The values are stored in distinct slabs of memory which are linked together with pointers.  
This enables efficient use of memory which doesn't require resize, sequential allocation etcc.

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### 6) Program for implicit and explicit type casting.

A) When we want to store a smaller datatype value to a big datatype value is called Implicit type casting and Vice versa is called Explicit type casting.  
Implicit program:

```
Short p=5;
```

```
Int q=p;
```

```
Explicit Program:
```

```
Int p=10;
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```
Short q= (short)p;
```

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