Bahria University,

Karachi Campus

LAB EXPERIMENT NO.

___05___

LIST OF TASKS

TASK NO	OBJECTIVE
01	Implement Singleton pattern on printer functionality.
02	Implement Singleton pattern for Sessions.
03	Implement Singleton pattern for logger application.

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Task No. 1: Implement Singleton pattern on printer functionality.

Solution:

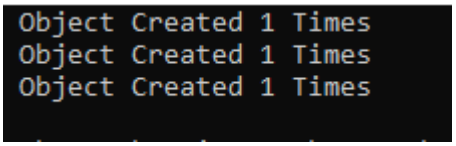
Main Class:

```
static void Main(string[] args){
singleton printer = singleton.GetSingletonObject();
printer.Print("First");
singleton printer1 = singleton.GetSingletonObject();
printer1.Print("Second");
singleton printer2 = singleton.GetSingletonObject();
printer2.Print("Third");}
```

Singleton Class:

```
class singleton{
public static singleton _printerObject;
public static int ObjectCount=0;
private singleton(){}
public static singleton GetSingletonObject(){
if(_printerObject == null){
_printerObject = new singleton();
ObjectCount+=1;}
return _printerObject;}
public void Print(string text){
Console.WriteLine(" Object Created "+ObjectCount+ " Times");}}
```

Output:



Task No. 2: Implement Singleton pattern for Sessions.

Solution:

Main Class:

```
static void Main(string[] args){
singleton session = singleton.GetSingletonObject();
session.Print("First");
singleton session1 = singleton.GetSingletonObject();
session1.Print("Second");}
```

Singleton Class:

```
class singleton{
public static singleton _sessionalObject;
```

```
public static int ObjectCount=0;
private singleton(){}
public static singleton GetSingletonObject(){
if(_sessionalObject == null){
_sessionalObject = new singleton();
ObjectCount+=1;}
return _sessionalObject;}
public void Print(string text){
Console.WriteLine(" Object Created "+ObjectCount+ " Times in Sessional Task");}}
```

Output:

```
Object Created 1 Times in Sessional Task
Object Created 1 Times in Sessional Task
```

Task No. 3: Implement Singleton pattern for logger application.

Solution:

Main Class:

```
static void Main(string[] args){
singleton logger = singleton.GetSingletonObject();
logger.Print("First");
singleton logger1 = singleton.GetSingletonObject();
logger1.Print("Second");}
```

Singleton Class:

```
class singleton{
public static singleton _loggerObject;
public static int ObjectCount=0;
private singleton(){}
public static singleton GetSingletonObject(){
if(_loggerObject == null){
_loggerObject = new singleton();
ObjectCount+=1;}
return _loggerObject;}
public void Print(string text){
Console.WriteLine(" Object Created "+ObjectCount+ " Times in logger Application");}}
```

Output:

```
Object Created 1 Times in logger Application
Object Created 1 Times in logger Application
```