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| Wednesday, February 2, 2022 C# LINQ, GENERICS, COLLECTIONS with OOP’s  By Nalli\_Prudhvi  NB\_Healthcare\_tech. |

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| Q. Declare list and print even no's using for, foreach loops, lambda exp, and linq. |
| Code: |
| static void Main(string[] args)  {  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \* Author : Nalli\_prudhvi \*  \* Purpose: Declare list and print even no's using for, foreach loops, lambda exp,\*  \* and linq. \*  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/ var my\_list = new List<int>() {12,13,14,15,16,17,18,19};  // print values with for loop.  Console.WriteLine("Printing values with for loop");  for (int i = 0; i < my\_list.Count; i++)  {  if(my\_list[i]%2==0)  Console.Write(my\_list[i]+",");  }  Console.WriteLine();  // print values with foreach loop.  Console.WriteLine("Printing values with foreach loop");  foreach(int i in my\_list)  {  if(i%2==0)  Console.Write(i+",");  }  Console.WriteLine();  // print values with lambda exp.  Console.WriteLine("Printing values with lambda exp");  my\_list.Where(e=>e%2==0).ToList().ForEach(e=>Console.Write(e+","));  Console.WriteLine();  // print values with linq.  Console.WriteLine("Printing values with linq");  var value = from d in my\_list  where d%2==0  select d;  value.ToList().ForEach(d => Console.Write(d+","));  } |
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| Q. create class Employee with 3 var and create a list of Employees print values with for, foreach lambda exp, and linq. |
| Code |
| class Employee  {  public int id;  public string name;  public int salary;  }  static void Main(string[] args)  {  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \* Author : Nalli\_prudhvi \*  \* Purpose: create class Employee with 3 var and create a list of Employees print \*  \* values with for, foreach lambda exp, and linq. \*  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/  List<Employee> employees = new List<Employee>() {  new Employee{id = 20221,name="zandaya",salary=1500000},  new Employee{id = 20222,name="karan",salary=1600000},  new Employee{id = 20223,name="hailey",salary=1500000},  new Employee{id = 20224,name="zoe",salary=1500000}};  // print values with for loop.  Console.WriteLine("Printing values with for loop");  for (int i = 0; i < employees.Count; i++)  {  Console.WriteLine($"ID = {employees[i].id}, Name = {employees[i].name}, salary = {employees[i].salary} ");  }  Console.WriteLine();  // print values with foreach loop.  Console.WriteLine("Printing values with foreach loop");  foreach (var d in employees)  {  Console.WriteLine($"ID = {d.id}, Name = {d.name}, salary = {d.salary} ");  }  Console.WriteLine();  // print values with lambda exp.  Console.WriteLine("Printing values with lambda exp");  employees.ForEach(e => Console.WriteLine($"ID = {e.id}, Name = {e.name}, salary = {e.salary} "));  Console.WriteLine();  // print values with linq.  Console.WriteLine("Printing values with linq");  var value = from R in employees  select R;  value.ToList().ForEach(g => Console.WriteLine($"ID = {g.id}, Name = {g.name}, salary = {g.salary}"));  Console.Read();  } |
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| Q. create a class product and add var and print the product name and brand whose product price more than 500. |
| Code |
| class Product  {  public string Product\_name;  public int Product\_price;  public string Product\_Brand;  public int Product\_ID;  }  internal class Program  {  static void Main(string[] args)  {  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \* Author : Nalli\_prudhvi \*  \* Purpose: create a class product and add var and print the product name and \*  \* brand whose product price more than 500. \*  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/  {    List<Product> products = new List<Product>()  {  new Product{Product\_name = "shoes",Product\_price=3000,Product\_Brand="Nike",Product\_ID=20221},  new Product{Product\_name = "bag",Product\_price=400,Product\_Brand="Wild\_craft", Product\_ID=20222},  new Product{Product\_name = "speaker",Product\_price=1000,Product\_Brand="Boat", Product\_ID=20223},  new Product{Product\_name = "choclate",Product\_price=300,Product\_Brand="cadbury", Product\_ID=20224}  };  // print values with for loop.  Console.WriteLine("Printing values with for loop");  for (int i = 0; i < products.Count; i++)  {  if(products[i].Product\_price>500)  {  Console.WriteLine($"Product\_Brand = {products[i].Product\_Brand}, Product\_name = {products[i].Product\_name} ");  }  }  Console.WriteLine();  // print values with foreach loop.  Console.WriteLine("Printing values with foreach loop");  foreach (var d in products)  {  if(d.Product\_price>500)  {  Console.WriteLine($"Product\_Brand = {d.Product\_Brand}, Product\_name = {d.Product\_name} ");  }  }  Console.WriteLine();  // print values with lambda exp.  Console.WriteLine("Printing values with lambda exp");  products.Where(d => d.Product\_price > 500).ToList().ForEach(y => Console.WriteLine($"Product\_Brand = {y.Product\_Brand}, Product\_name = {y.Product\_name}"));  Console.WriteLine();  // print values with linq.  Console.WriteLine("Printing values with linq");  var value = from R in products  where R.Product\_price > 500  select R;  value.ToList().ForEach(g => Console.WriteLine($"Product\_Brand = {g.Product\_Brand}, Product\_name = {g.Product\_name}"));  Console.Read();  }  }  } |
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| Q create a class department and add var and print the Id and name of Department whose emp\_count more than 500. |
| Code |
| class Department  {  public int id;  public string name;  public int emp\_count;  }  internal class Program  {  static void Main(string[] args)  {  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \* Author : Nalli\_prudhvi \*  \* Purpose: create a class department and add var and print the Id and name of \*  \* department whose emp\_count more than 500 \*  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/    List<Department> Deptemp = new List<Department>()  {  new Department{id=20221,name="HR",emp\_count=45},  new Department{id=20222,name="PRODUCTION",emp\_count=75},  new Department{id=20223,name="R&D",emp\_count=35},  new Department{id=20224,name="DEVELOPMENT",emp\_count=55}  };  // print values with for loop.  Console.WriteLine("Printing values with for loop");  for (int i = 0; i < Deptemp.Count; i++)  {  if (Deptemp[i].emp\_count > 50)  {  Console.WriteLine($"dEPARTMENT\_ID = {Deptemp[i].id}, DEPARTMET\_NAME = {Deptemp[i].name} ");  }  }  Console.WriteLine();  // print values with foreach loop.  Console.WriteLine("Printing values with foreach loop");  foreach (var d in Deptemp)  {  if (d.emp\_count > 50)  {  Console.WriteLine($"DEPARTMENT\_ID = {d.id}, DEPARTMET\_NAME = {d.name} ");  }  }  Console.WriteLine();  // print values with lambda exp.  Console.WriteLine("Printing values with lambda exp");  Deptemp.Where(A => A.emp\_count > 50).ToList().ForEach(y => Console.WriteLine($"EPARTMENT\_ID = {y.id}, DEPARTMET\_NAME = {y.name}"));  Console.WriteLine();  // print values with linq.  Console.WriteLine("Printing values with linq");  var value = from R in Deptemp  where R.emp\_count > 50  select R;  value.ToList().ForEach(g => Console.WriteLine($"Product\_Brand = {g.id}, Product\_name = {g.name}"));  Console.Read();  }  } |
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| Q. create a own class and variables and itialize with some value |
| Code |
| class BankAcc  {  public string Acc\_num;  public string Acc\_name;  public decimal Acc\_Balance;  }  internal class Program  {  static void Main(string[] args)  {  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \* \*  \* Author : Nalli\_prudhvi \*  \* Purpose: create a own class and variables and itialize with some value \*  \* \*  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/  List<BankAcc> accounts = new List<BankAcc>()  {  new BankAcc{Acc\_num="123ASD456",Acc\_name="GOKU",Acc\_Balance=5500.00m},  new BankAcc{Acc\_num="123ASD457",Acc\_name="GOHAN",Acc\_Balance=52500.00m},  new BankAcc{Acc\_num="123ASD458",Acc\_name="GOTEN",Acc\_Balance=4500.00m},  new BankAcc{Acc\_num="123ASD459",Acc\_name="TRUNKS",Acc\_Balance=2500.00m}  };  // print values with for loop.  Console.WriteLine("Printing values with for loop");  for (int i = 0; i < accounts.Count; i++)  {  if (accounts[i].Acc\_Balance > 3000)  {  Console.WriteLine($"Account\_name = {accounts[i].Acc\_name}, Account\_number = {accounts[i].Acc\_num} ");  }  }  Console.WriteLine();  // print values with foreach loop.  Console.WriteLine("Printing values with foreach loop");  foreach (var d in accounts)  {  if (d.Acc\_Balance > 3000)  {  Console.WriteLine($"Account\_name = {d.Acc\_name}, Account\_number = {d.Acc\_num}");  }  }  Console.WriteLine();  // print values with lambda exp.  Console.WriteLine("Printing values with lambda exp");  accounts.Where(A => A.Acc\_Balance > 3000).ToList().ForEach(y => Console.WriteLine($"Account\_name = {y.Acc\_name}, Account\_number = {y.Acc\_num}"));  Console.WriteLine();  // print values with linq.  Console.WriteLine("Printing values with linq");  var value = from R in accounts  where R.Acc\_Balance > 3000  select R;  value.ToList().ForEach(g => Console.WriteLine($"Account\_name = {g.Acc\_name}, Account\_number = {g.Acc\_num}"));  Console.Read();  }  } |
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