**Program**

using System;

usingSystem.Collections.Generic;

usingSystem.Linq;

usingSystem.Text;

usingSystem.Threading.Tasks;

namespace C# 2

{

classProgram

{

staticvoid Main(string[] args)

{

ApplicationUtilities.DisplayApplicationInformation();

ApplicationUtilities.DisplayDivider("Start Program");

ApplicationUtilities.DisplayDivider("Prompt for Employee Information and create first employee");

Employee employee1 = newEmployee();

employee1.firstName = InputUtilities.getStringInputValue("First name");

employee1.lastName = InputUtilities.getStringInputValue("Last name");

employee1.gender = InputUtilities.getCharInputValue("Gender");

employee1.dependents = InputUtilities.getIntegerInputValue("# Dependents");

employee1.annualSalary = InputUtilities.getDoubleInputValue("Annual Salary");

Console.WriteLine(employee1.ToString());

ApplicationUtilities.PauseExecution();

Employee employee2 = newEmployee("Sue", "Smith", 'F', 3, 52000);

Console.WriteLine(employee2.ToString());

ApplicationUtilities.TerminateApplication();

}

}

}

**Application Utilities**

using System;

usingSystem.Collections.Generic;

usingSystem.Linq;

usingSystem.Text;

namespace C# 2

{

publicclassApplicationUtilities

{

publicstaticvoidDisplayApplicationInformation()

{

Console.WriteLine("Welcome the Basic Employee Program");

Console.WriteLine("CIS247a, Week 2 Lab");

Console.WriteLine("Name: Kevin Nguyen");

Console.WriteLine("This program accepts user input as a string, then makes the \nappropriate data conversion and assigns the value to Employee objects");

Console.WriteLine();

}

publicstaticvoidDisplayDivider(stringoutputTitle)

{

Console.WriteLine("\n\*\*\*\*\*\*\*\*\* " + outputTitle + " \*\*\*\*\*\*\*\*\*\n");

}

publicstaticvoidTerminateApplication()

{

DisplayDivider("Program Termination");

Console.Write("Thank you. Press any key to terminate the program...");

Console.ReadLine();

}

publicstaticvoidPauseExecution()

{

Console.Write("\nProgram paused, press any key to continue...");

Console.ReadLine();

Console.WriteLine();

}

}

}

**Input Utilities**

using System;

usingSystem.Collections.Generic;

usingSystem.Linq;

usingSystem.Text;

namespace C# 3

{

publicclassInputUtilities

{

publicstaticstringGetInput(stringinputType)

{

stringstrInput = String.Empty;

Console.Write("Enter the " + inputType + ": ");

strInput = Console.ReadLine();

returnstrInput;

}

publicstaticstringgetStringInputValue(stringinputType)

{

string value = String.Empty;

bool valid = false;

stringinputString = String.Empty;

do

{

inputString = GetInput(inputType);

if (!String.IsNullOrEmpty(inputString))

{

value = inputString;

valid = true;

}

else

{

value = "Invalid input";

valid = false;

}

if (!valid)

Console.WriteLine("Invalid " + inputType + " try again!");

} while (!valid);

return value;

}

publicstaticintgetIntegerInputValue(stringinputType)

{

bool valid = false;

int value = 0;

stringinputString = String.Empty;

do

{

inputString = GetInput(inputType);

if (!(String.IsNullOrEmpty(inputString)))

{

valid = Int32.TryParse(inputString, out value);

}

if (!valid)

Console.WriteLine("Invalid " + inputType + " try again!");

} while (!valid);

return value;

}

publicstaticdoublegetDoubleInputValue(stringinputType)

{

bool valid = false;

double value = 0;

stringinputString = String.Empty;

do

{

inputString = GetInput(inputType);

if (!(String.IsNullOrEmpty(inputString)))

{

valid = Double.TryParse(inputString, out value);

}

if (!valid)

Console.WriteLine("Invalid " + inputType + " try again!");

} while (!valid);

return value;

}

publicstaticchargetCharInputValue(stringinputType)

{

bool valid = false;

char value = 'u';

stringinputString = String.Empty;

do

{

inputString = GetInput(inputType);

if (!(String.IsNullOrEmpty(inputString)))

{

valid = Char.TryParse(inputString, out value);

}

if (!valid)

Console.WriteLine("Invalid " + inputType + " try again!");

} while (!valid);

return value;

}

}

}

**Employee**

using System;

usingSystem.Collections.Generic;

usingSystem.Linq;

usingSystem.Text;

usingSystem.Threading.Tasks;

namespace C# 4

{

publicclassEmployee

{

publicconstdouble MIN\_SALARY = 20000;

publicconstdouble MAX\_SALARY = 100000;

publicconstint MIN\_DEPENDENTS = 0;

publicconstint MAX\_DEPENDENTS = 10;

publicstringfirstName;

publicstringlastName;

publicdoubleannualSalary;

publicchar gender;

publicint dependents;

public Employee()

{

firstName = string.Empty;

lastName = string.Empty;

annualSalary = MIN\_SALARY;

dependents = MIN\_DEPENDENTS;

}

public Employee(stringfirstname, stringlastname, char gender, int dependents, double salary)

{

this.firstName = firstname;

this.lastName = lastname;

this.annualSalary = salary;

this.dependents = MIN\_DEPENDENTS;

}

publicstringEmployeeName

{

get { returnfirstName + " " + lastName; }

}

publicdoubleCalculatePay()

{

returnannualSalary / 52;

}

publicoverridestringToString()

{

string output;

output = "\n========== Employee Information ==========";

output = "\n\t Name:\t" + firstName + " " + lastName;

output = "\n\t Gender:\t" + gender;

output = "\n Dependents:\t" + dependents;

output = "\n\tAnnual Salary:\t" + annualSalary.ToString("C2");

output = "\n\t Weekly Pay:\t" + CalculatePay().ToString("C2");

return output;

}

}

}