ARRAY IN C #:

A [variable](https://www.tutorialsteacher.com/csharp/csharp-variable) is used to store a literal value, whereas an array is used to store multiple literal values. An array is the data structure that stores a fixed number of literal values (elements) of the same [data type](https://www.tutorialsteacher.com/csharp/csharp-data-types). Array elements are stored contiguously in the memory. an array can be of 2 types: single-dimensional, multidimensional

single-dimensional EXAMPLE:

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| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace ArrayExample  {  class Program  {  static void Main(string[] args)  {  try  {  //DATATYPE[] VARIABLENAME;  int[] age;  string[] names;  char[] grade;  age = new int[5];  age[0] = 45;  age[1] = 47;  age[2] = 12;  age[3] = 56;  age[4] = 23;  names = new string[3];  names[0] = "sathiya";  names[1] = "salma";  names[2] = "edya";    grade = new char[4];  grade[0] = 'a';  grade[1] = 'b';  grade[2] = 'c';  grade[3] = 'd';  Console.WriteLine("AGE");  for (int i = 0; i < age.Length; i++)  {  Console.WriteLine(age[i]);  }  Console.WriteLine("--------------------");  Console.WriteLine("NAME");  for (int j = 0; j < 3; j++)  {  Console.WriteLine(names[j]);  }  Console.WriteLine("--------------------");  Console.WriteLine("GRADE");  for (int j = 0; j < grade.Length; j++)  {  Console.WriteLine(grade[j]);  }  Console.WriteLine("--------------------");  }  catch (Exception e)  {  Console.WriteLine(e.Message);  }  Console.ReadKey();  }  }  } |

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| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace ArrayExample  {  class Program  {  static void Main(string[] args)  {  try  {  //DATATYPE[] VARIABLENAME=new datatype[size];  int[] age=new int[5];  string[] names= new string[3];;  char[] grade = new char[4];;    age[0] = 45;  age[1] = 47;  age[2] = 12;  age[3] = 56;  age[4] = 23;    names[0] = "sathiya";  names[1] = "salma";  names[2] = "edya";      grade[0] = 'a';  grade[1] = 'b';  grade[2] = 'c';  grade[3] = 'd';  Console.WriteLine("AGE");  for (int i = 0; i < age.Length; i++)  {  Console.WriteLine(age[i]);  }  Console.WriteLine("--------------------");  Console.WriteLine("NAME");  for (int j = 0; j < 3; j++)  {  Console.WriteLine(names[j]);  }  Console.WriteLine("--------------------");  Console.WriteLine("GRADE");  for (int j = 0; j < grade.Length; j++)  {  Console.WriteLine(grade[j]);  }  Console.WriteLine("--------------------");  }  catch (Exception e)  {  Console.WriteLine(e.Message);  }  Console.ReadKey();  }  }  } |

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| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace ArrayExample  {  class Program  {  static void Main(string[] args)  {  try  {  //DATATYPE[] VARIABLENAME=new datatype[size];  int[] age=new int[5];  string[] names= new string[3];  char[] grade = new char[4];  string[] city = { "chennai", "bangalore", "cbe", "madurai", "salem", "trichy", "pudukotai" };  long[] ph = { 9098787676, 9876545432, 9876787676, 7876545432, 9876543433 };  age[0] = 45;  age[1] = 47;  age[2] = 12;  age[3] = 56;  age[4] = 23;    names[0] = "sathiya";  names[1] = "salma";  names[2] = "edya";      grade[0] = 'a';  grade[1] = 'b';  grade[2] = 'c';  grade[3] = 'd';  Console.WriteLine("AGE");  for (int i = 0; i < age.Length; i++)  {  Console.WriteLine(age[i]);  }  Console.WriteLine("--------------------");  Console.WriteLine("NAME");  for (int j = 0; j < 3; j++)  {  Console.WriteLine(names[j]);  }  Console.WriteLine("--------------------");  Console.WriteLine("GRADE");  for (int j = 0; j < grade.Length; j++)  {  Console.WriteLine(grade[j]);  }  Console.WriteLine("--------------------");  Console.WriteLine("PHONE");  for (int j = 0; j < ph.Length; j++)  {  Console.WriteLine(ph[j]);  }  Console.WriteLine("--------------------");  Console.WriteLine("CITY");  for (int j = 0; j < city.Length; j++)  {  Console.WriteLine(city[j]);  }  Console.WriteLine("--------------------");  }  catch (Exception e)  {  Console.WriteLine(e.Message);  }  Console.ReadKey();  }  }  } |

ARRAY FROM USERINPUT:

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| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace ArrayExample  {  class ArrayUserInputEx  {  static void Main(string[] args)  {  try {    Console.WriteLine("enter city size");  int size = Convert.ToInt16(Console.ReadLine());  Console.WriteLine("enter "+size +" city");  string[] city = new string[size];  for (int i = 0; i < size; i++)  {  city[i] = Console.ReadLine();  }  Console.WriteLine("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_");  Console.WriteLine("printing statement");  for (int i = 0; i < size; i++)  {  Console.WriteLine(city[i]);  }  Console.ReadKey();    }  catch (Exception e)  {  Console.WriteLine(e.Message);  }  finally  { }  }  }  } |

Two Dimentional Array:

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| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace ConsoleApp2  {  internal class twodex  {  static void Main(string[] args)  {  try  {  //type 1  //datatype[,] variablename=new datatype[row,column];  int[,] yop = new int[2, 2];  yop[0, 0] = 2017;  yop[0, 1] = 2018;  yop[1, 0] = 2014;  yop[1, 1] = 2016;  for (int i = 0; i < 2; i++)//row  {  for (int j = 0; j < 2; j++)//column  {  Console.Write(yop[i, j] + " ");  }  Console.WriteLine();  }  Console.WriteLine("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_");  //type 2  //datatype[,] variablename={{},{},{}};  string[,] course = { { "java", "sql", "web" }, { "mt", "at", "sql" }, { "sql", "web", ".net" } };  for (int i = 0; i < 3; i++)//row  {  for (int j = 0; j <3; j++)//column  {  Console.Write(course[i, j] + " ");  }  Console.WriteLine();  }  //type 3  //datatype[,] variablename=new datatype[row,column] {{},{},{}};  char[,] alpha = { { 'a', 'b' }, { 'c', 'd' }, { 'e', 'f' } };  for (int i = 0; i < 3; i++)//row  {  for (int j = 0; j < 2; j++)//column  {  Console.Write(alpha[i, j] + " ");  }  Console.WriteLine();  }  //type 4  //get from user  Console.WriteLine("enter number of rows");  int row = Convert.ToInt16(Console.ReadLine());  Console.WriteLine("enter number of column");  int column = Convert.ToInt16(Console.ReadLine());  Console.WriteLine("plz enter "+row\*column +" names");  Console.WriteLine("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_");  string[,] studname=new string[row,column];  for (int i = 0; i < row; i++)  {  for (int j = 0; j < column; j++)  {  studname[i,j] = Console.ReadLine();  }  }  Console.WriteLine("printing " + row \* column + " names in matrix format");  Console.WriteLine("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_");  for (int i = 0; i < row; i++)//row  {  for (int j = 0; j < column; j++)//column  {  Console.Write(studname[i, j] + " ");  }  Console.WriteLine();  }  }  catch (Exception ex)  {  Console.WriteLine(ex.Message);  }  Console.ReadKey();  }  }  } |