



delphi

project development intermediate delphi course

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Delphi Intermediate Chapter 9:

Binary Search:

The Binary Search is a more complex method of searching for a defined value within an array of values. I tend to avoid the Binary Search due to its complexities and also because the Binary Search is more suited for very large amounts of data.

This is the fundamental Delphi code of a Binary Search:

```
Type
  TNames = Array[1..30] of string;

Var //Global
  Names: TNames;
  LowerB, UpperB, Mid, Loop, Cnt: Integer;

Var //Local
  Search: String;
  Flag: Boolean;
  Pos: Integer;
Begin
  Flag:= False;
  LowerB:= 0;
  UpperB:= Cnt +1//A running counter of how large the array is.
  Search:= inputbox('SEARCH ', 'Please Enter a name to Search:', Names[1]);
  While (flag = false) and (UpperB <> LowerB + 1) do
    Begin
      Mid:= (lowerB + UpperB) div 2;
      If ( Nmaes[mid] = search)
      Then begin
        PnlSearch.Caption:= ('Search For: '+Names[loop]+ ' Returned a FOUND Outcome at: '+
Inttostr(mid));
        Flag:= true;
      End
      Else if (Names[mid] < Search)
      Then LowerB:= Mid
      Else UpperB:= Mid;
    End;
  End;
```

Notes:

Simply by looking at the above code it is easy to understand how one may wonder how on earth it works, what is scarier is just how brilliantly it does work. However that is as much as much as I will explain on the Binary Search. I worked out how this system works by completing a trace table of the process not only will it help you but it will also guide you in the right direction if your search does not full work. It is necessary for you to understand how the code works yourself as that is the only way you can successfully program one under test situations.

Delphi Intermediate Chapter 10:

Insertion:

On the next tutorial we will cover insertion of data into an ordered array. Please download the next tutorial at: [Click Here!](#)