BİL106 Nesne Yönelimli Programlama

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Bölüm 4: Yapılar

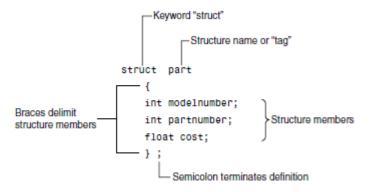
Yapılar

- > Float, int, double, char vs gibi temel veri tipleri tek bir bilgiyi simgeler
- > Bir yapı ise, temel değişkenlerin bir araya getirilmesidir
- > Bir yapı içerisindeki değişkenler değişik tipte olabilir
 - Örneğin int, float,char gibi
- > Bir yapı içerisindeki verilere yapının ÜYELERİ denir

Basit bir YAPI örneği

```
// parts.cpp
// uses parts inventory to demonstrate structures
#include <iostream>
using namespace std;
struct part
                      //declare a structure
                      //ID number of widget
  int modelnumber;
                      //ID number of widget part
  int partnumber;
  float cost;
                      //cost of part
  };
int main()
  part part1;
                      //define a structure variable
  part1.modelnumber = 6244; //give values to structure members
  part1.partnumber = 373;
  part1.cost = 217.55F;
                      //display structure members
  cout << ", part " << part1.partnumber;</pre>
  cout << ", costs $" << part1.cost << endl;
  return 0;
```

Bir Yapının Sentaksı



Yapı Üyelerine İlk Değer Ataması

```
// partinit.cpp
// shows initialization of structure variables
#include <iostream>
using namespace std;
struct part
                        //specify a structure
  int modelnumber;
                       //ID number of widget
  int partnumber;
                       //ID number of widget part
  float cost;
                       //cost of part
  };
int main()
                        //initialize variable
  part part1 = { 6244, 373, 217.55F };
  part part2;
                        //define variable
                        //display first variable
  cout << "Model " << part1.modelnumber;
  cout << ", part " << part1.partnumber;
  cout << ", costs $" << part1.cost << endl;
  part2 = part1;
                       //assign first variable to second
                        //display second variable
                  << part2.modelnumber;
  cout << "Model "
  cout << ", part " << part2.partnumber;
  cout << ", costs $" << part2.cost << endl;
  return 0;
```

Bir Ölçüm Örneği

```
// englstrc.cpp
// demonstrates structures using English measurements
#include <iostream>
using namespace std;
struct Distance
                          //English distance
  int feet;
  float inches;
int main()
  Distance d1, d3;
                       //define two lengths
  Distance d2 = { 11, 6.25 }; //define & initialize one length
                          //get length d1 from user
  cout << "\nEnter feet: "; cin >> d1.feet;
  cout << "Enter inches: "; cin >> d1.inches;
                          //add lengths d1 and d2 to get d3
  d3.inches = d1.inches + d2.inches; //add the inches
  d3.feet = 0;
                        //(for possible carry)
  if(d3.inches >= 12.0)
                      //if total exceeds 12.0,
                        //then decrease inches by 12.0
     d3.inches -= 12.0;
                          //and
     d3.feet++;
                          //increase feet by 1
  d3.feet += d1.feet + d2.feet; //add the feet
                          //display all lengths
  cout << d1.feet << "\'-" << d1.inches << "\" + ";
  cout << d2.feet << "\'-" << d2.inches << "\" = ";
  cout << d3.feet << "\'-" << d3.inches << "\"\n";
  return 0:
```

HAFTA 3

İç İçe Yapılar

```
// englarea.cpp
// demonstrates nested structures
#include <iostream>
using namespace std;
struct Distance
                          //English distance
  int feet;
  float inches;
  };
struct Room
                         //rectangular area
  Distance length;
                         //length of rectangle
  Distance width;
                         //width of rectangle
  };
int main()
  Room dining;
                         //define a room
  dining.length.feet = 13;
                         //assign values to room
  dining.length.inches = 6.5;
  dining.width.feet = 10;
  dining.width.inches = 0.0;
                         //convert length & width
  float 1 = dining.length.feet + dining.length.inches/12;
  float w = dining.width.feet + dining.width.inches/12;
                         //find area and display it
  cout << "Dining room area is " << 1 * w
      << " square feet\n" ;
  return 0;
```