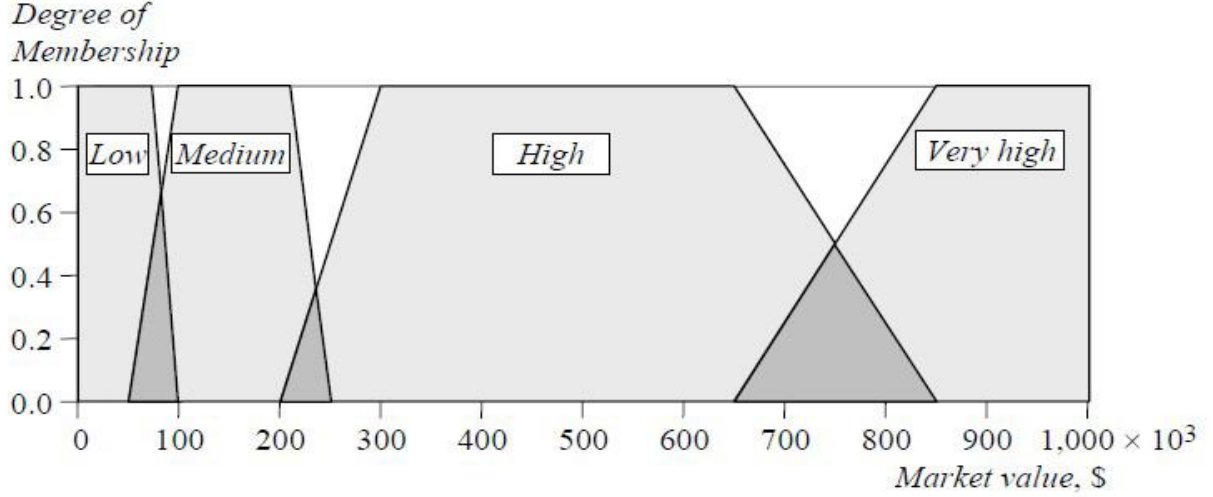


BLM/COM 436 Bulanık Mantık

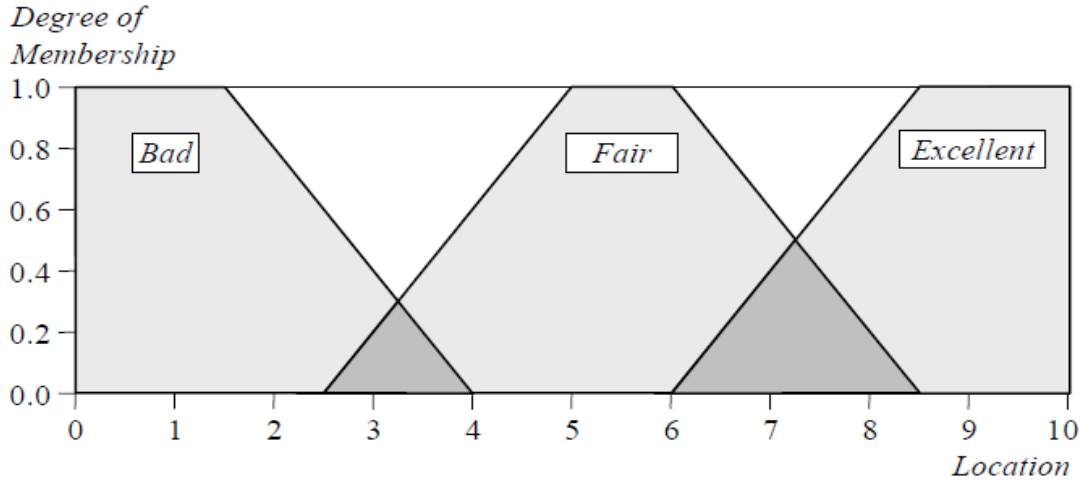
Bulanık mantık karar verme problemlerinde kullanılmaktadır. Bu projede ev kredisi çekecek bir kişi için evin özellikleri ve krediyi çekecek kişinin bilgileri kullanılarak bankalar tarafından kredi miktarına karar verilebilmesini sağlayacak bir karar destek sistemi geliştireceksiniz.

Elimizde bulunan değişkenler aşağıdaki girdi üyelik fonksiyonlarıyla tanımlanacaktır:

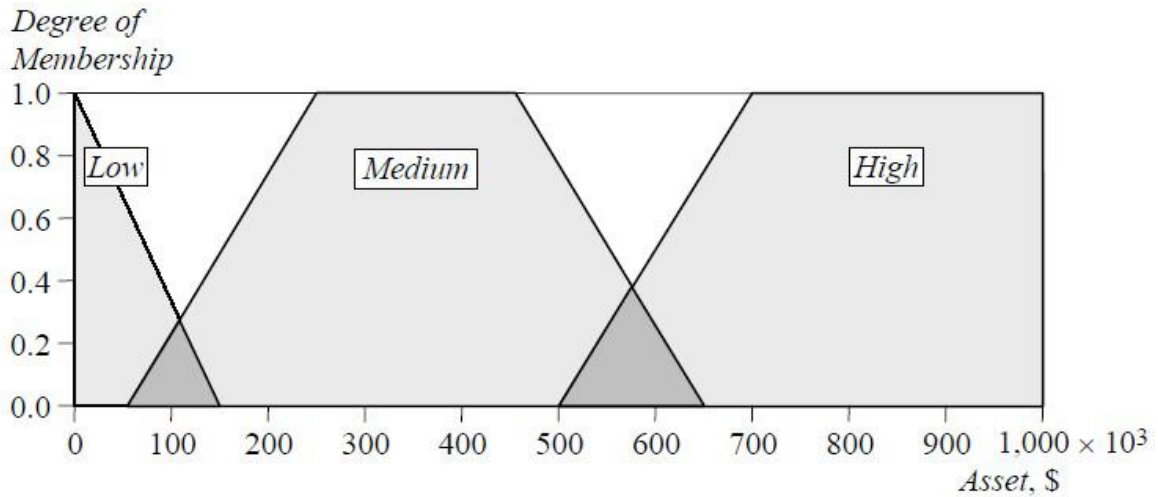
1. Evin piyasa değeri:



2. Evin konumu:

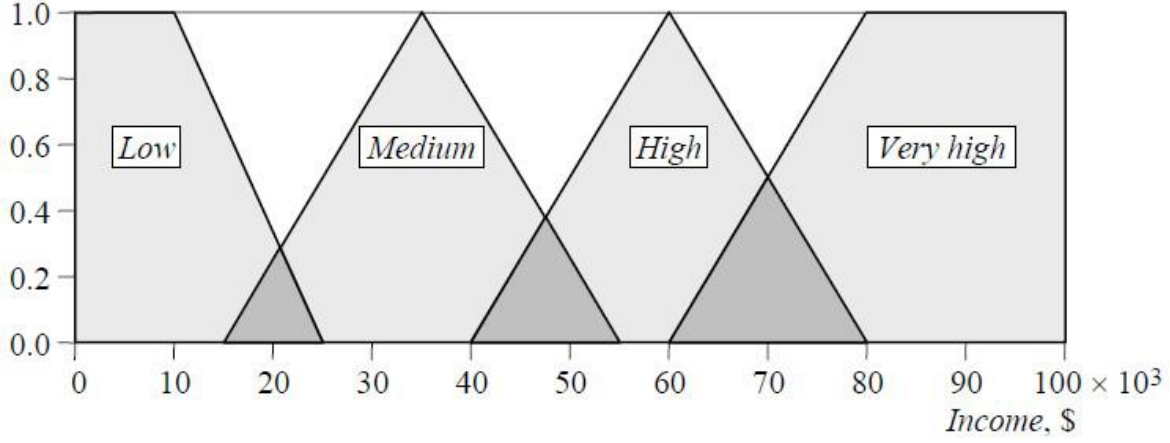


3. Başvuran kişinin mal varlığı:



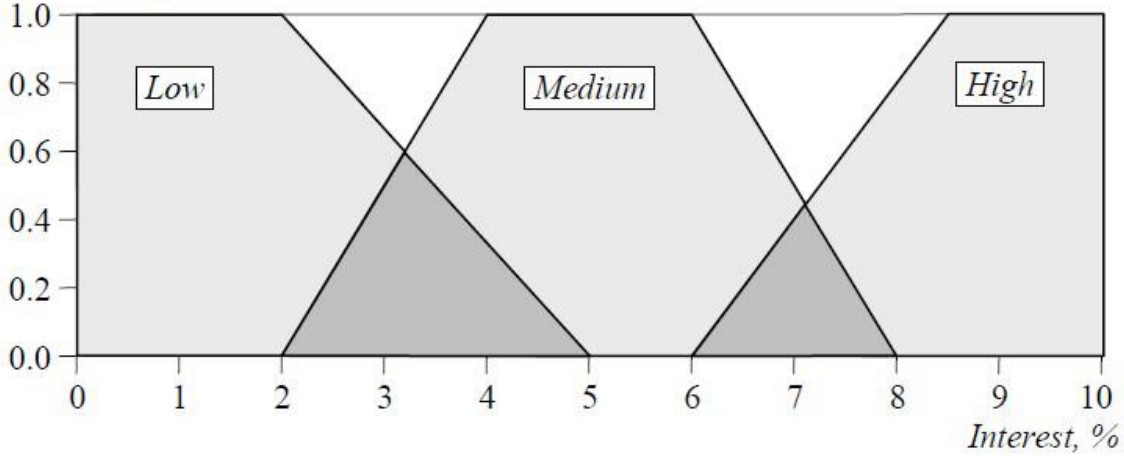
4. Başvuran kişinin geliri:

Degree of Membership



5. Faiz oranı:

Degree of Membership

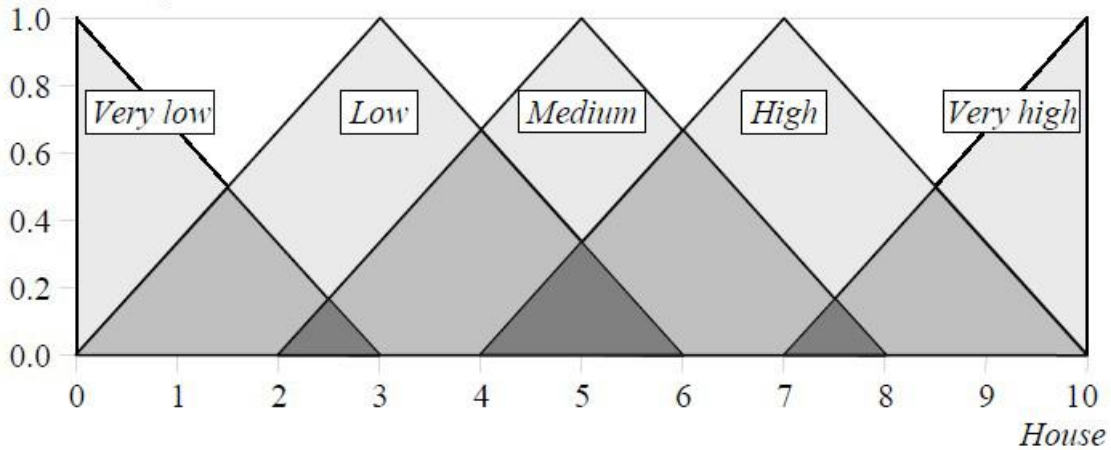


Verilen bilgilere göre ilk önce evin değerlendirilmesi yapılacak, sonrasında başvuran kişinin değerlendirilmesi yapılacak ve en sonunda da kredi miktarına karar verilecektir.

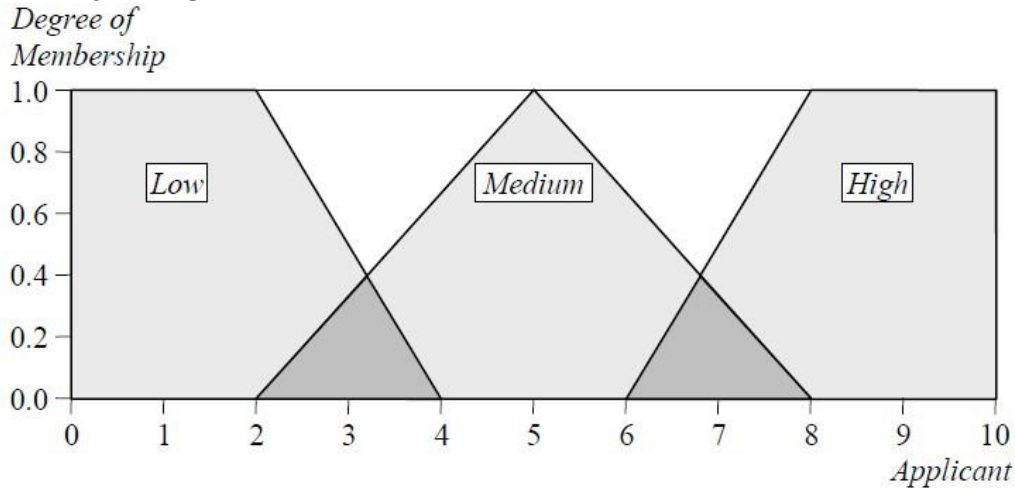
Buna göre 3 adet çıktı üyelik fonksiyonumuz da aşağıdaki gibidir:

1. Evin değerlendirilmesi:

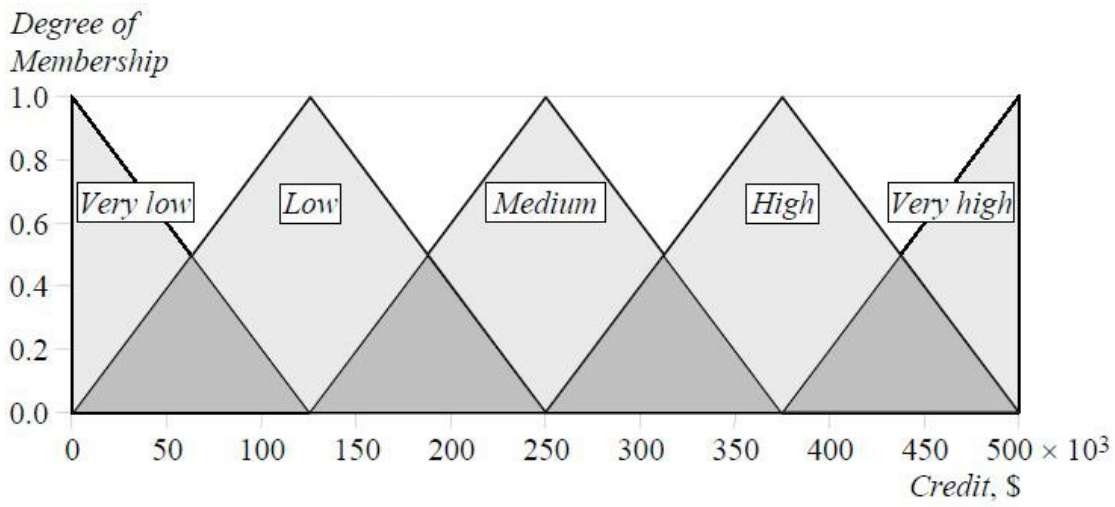
Degree of Membership



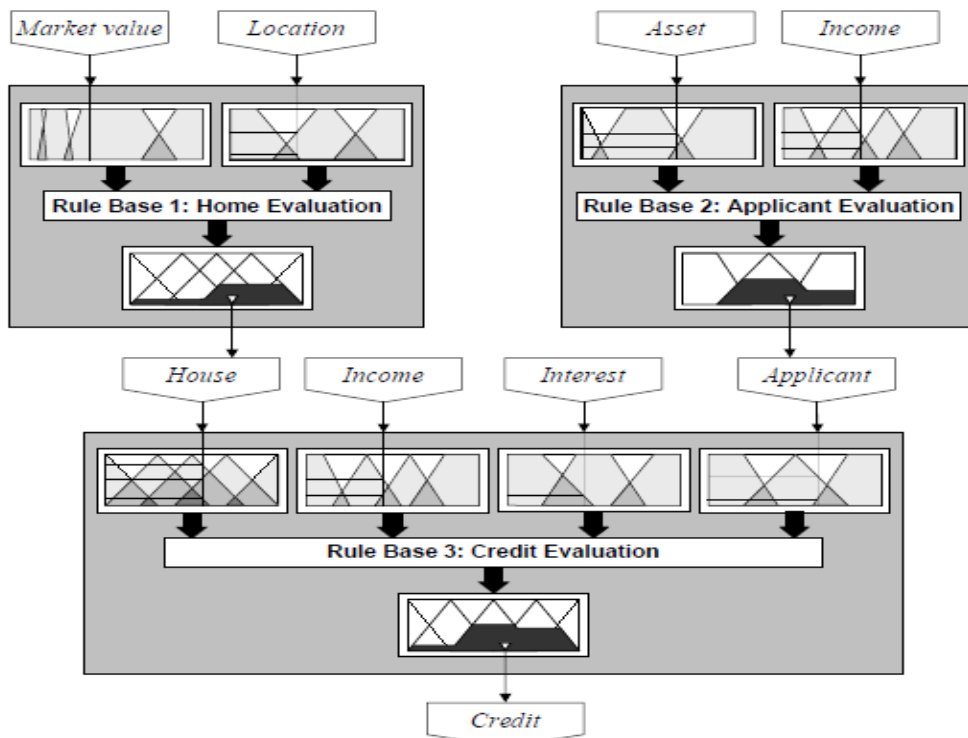
2. Başvuran kişinin değerlendirilmesi:



3. Kredi miktarının değerlendirilmesi



Verilen girdi üyelik fonksiyonlarını aşağıdaki hiyerarşik yapıyı kullanarak ilk önce evin, başvuran kişinin değerlendirmesini yaparak en sonunda da bu değerlendirmeden gelen bilgiyi de kullanarak banka tarafından verilecek kredi miktarını hesaplamamız gerekmektedir.



Değerlendirmede kullanılacak kurallar:

1. Evin değerlendirilmesi

1. If (Market_value is Low) then (House is Low)
2. If (Location is Bad) then (House is Low)
3. If (Location is Bad) and (Market_value is Low) then (House is Very_low)
4. If (Location is Bad) and (Market_value is Medium) then (House is Low)
5. If (Location is Bad) and (Market_value is High) then (House is Medium)
6. If (Location is Bad) and (Market_value is Very_high) then (House is High)
7. If (Location is Fair) and (Market_value is Low) then (House is Low)
8. If (Location is Fair) and (Market_value is Medium) then (House is Medium)
9. If (Location is Fair) and (Market_value is High) then (House is High)
- 10.If (Location is Fair) and (Market_value is Very_high) then (House is Very_high)
- 11.If (Location is Excellent) and (Market_value is Low) then (House is Medium)
- 12.If (Location is Excellent) and (Market_value is Medium) then (House is High)
- 13.If (Location is Excellent) and (Market_value is High) then (House is Very_high)
- 14.If (Location is Excellent) and (Market_value is Very_high) then (House is Very_high)

2. Başvuran kişinin değerlendirilmesi

1. If (Asset is Low) and (Income is Low) then (Applicant is Low)
2. If (Asset is Low) and (Income is Medium) then (Applicant is Low)
3. If (Asset is Low) and (Income is High) then (Applicant is Medium)
4. If (Asset is Low) and (Income is Very_high) then (Applicant is High)
5. If (Asset is Medium) and (Income is Low) then (Applicant is Low)
6. If (Asset is Medium) and (Income is Medium) then (Applicant is Medium)
7. If (Asset is Medium) and (Income is High) then (Applicant is High)
8. If (Asset is Medium) and (Income is Very_high) then (Applicant is High)
9. If (Asset is High) and (Income is Low) then (Applicant is Medium)
- 10.If (Asset is High) and (Income is Medium) then (Applicant is Medium)
- 11.If (Asset is High) and (Income is High) then (Applicant is High)
- 12.If (Asset is High) and (Income is Very_high) then (Applicant is High)

Kredi miktarının değerlendirilmesi

1. If (Income is Low) and (Interest is Medium) then (Credit is Very_low)
2. If (Income is Low) and (Interest is High) then (Credit is Very_low)
3. If (Income is Medium) and (Interest is High) then (Credit is Low)
4. If (Applicant is Low) then (Credit is Very_low)
5. If (House is Very_low) then (Credit is Very_low)
6. If (Applicant is Medium) and (House is Very_low) then (Credit is Low)
7. If (Applicant is Medium) and (House is Low) then (Credit is Low)
8. If (Applicant is Medium) and (House is Medium) then (Credit is Medium)
9. If (Applicant is Medium) and (House is High) then (Credit is High)
- 10.If (Applicant is Medium) and (House is Very_high) then (Credit is High)
- 11.If (Applicant is High) and (House is Very_low) then (Credit is Low)
- 12.If (Applicant is High) and (House is Low) then (Credit is Medium)
- 13.If (Applicant is High) and (House is Medium) then (Credit is High)
- 14.If (Applicant is High) and (House is High) then (Credit is High)
- 15.If (Applicant is High) and (House is Very_high) then (Credit is Very_high)

Proje Gereksinimleri:

1. Sonularınıızı gsterirken **en az 3 farklı bařvuran kiřiye** istedikleri farklı evler iin verilmesi gereken kredi miktarını gstermeniz gerekmektedir.
2. Geliřtireceėiniz sistem **Mamdani ıkarım yntemini** kullanarak sonu retmelidir.
3. Projenizi en fazla 3 kiřiden oluřan gruplarla geliřtirmelisiniz. Demo iin tm grup yelerinin hazır olması gerekmektedir.
4. Teslim ve sunum tarihi: **20 Mayıs 2019 - Ders saati**