I- Sub-system CF

1- Age

Age	Symbol
≤ 11	1
[12 , 18]	2
[19 , 30]	3
[31 , 45]	4
[46 , 60]	5
[61 , 75]	6
≥ 76	7

2- Gender

Gender	Symbol
'M'	1
'F'	2

3- Occupation

Frequency of occupation	Symbol
≤ 10	1
[11 , 20]	2
[21 , 40]	3
[41 , 70]	4
[71 , 100]	5
[101 , 150]	6
≥ 151	7

4- ZipCode

Frequency of first-character(zipcode)	Symbol
≤ 10	1
[11 , 50]	2
[51 , 70]	3
[71 , 100]	4
[101 , 150]	5
≥ 151	4

II-   Sub-system CB

1- Movie genre (4 clusters => 15 symbols)

Frequency of genre	Cluster
≥ 700	1
[400 , 700[	2
[100 , 400[	3
< 100	4

2- Release date

Release date	Symbol
≤ 1979	1
[1980 , 1985]	2
[1986, 1990]	3
[1991, 1995]	4
[1996, 2000]	5
[2001, 2005]	6
[2006, 2010]	7
[2011, 2015]	8
[2016, 2020]	9
≥ 2021	10

3- Vote average

Vote average	Symbol
[0 , 0.5]	1
]0.5 , 1]	2
]1 , 1.5]	3
]1.5 , 2]	4
]2 , 2.5]	5
]2.5 , 3]	6
]3 , 3.5]	7
]3.5 , 4]	8
]4 , 4.5]	9
> 4.5	10

4- Vote count

Vote count	Symbol
[0 , 25]	1
[26 , 50]	2
[51 , 75]	3
[76 , 100]	4
[101 , 125]	5
[126 , 150]	6
[151 , 200]	7
[201 , 250]	8
[251 , 300]	9
≥ 301	10

III-   Hybrid system

1- **Score**

Score	Symbol
[0 , 1]	1
]1 , 2]	2
]2 , 3]	3
]3 , 4]	4
> 4	5