**Project II - the flags**

The data file contains details of various nations and their flags. In this file the fields are separated   
by spaces. With this data

1. Try to predict the religion of a country from the characteristics of the flag with at least two method. You must comare the methods and select the one you think as better

2. Use some clustering method to find clusters of flags with respect their characteristics (only)  
Explain the clusters found

For both you need to explain the methods you have used, select the variables you think as useful, check how good is your prediction/clustering. For your report keep in mind that your report will be consider by someone with small knowledge of the methods so you need to explain them in a rigorous but simple way.  
Avoid using output from R.

As for the first project you need to upload, the report, an 8 [slides](https://e-mscba.dmst.aueb.gr/mod/folder/view.php?id=2210) presentation with your findings and the R code used.

Deadline 28/3/2017, 23.55.  After that date  you will have -2 point for every day of delay

Attribute Information:  
1. name Name of the country concerned  
2. landmass 1=N.America, 2=S.America, 3=Europe, 4=Africa, 4=Asia, 6=Oceania  
3. zone Geographic quadrant, based on Greenwich and the Equator  
1=NE, 2=SE, 3=SW, 4=NW  
4. area in thousands of square km  
5. population in round millions  
6. language 1=English, 2=Spanish, 3=French, 4=German, 5=Slavic, 6=Other   
Indo-European, 7=Chinese, 8=Arabic,   
9=Japanese/Turkish/Finnish/Magyar, 10=Others  
7. religion 0=Catholic, 1=Other Christian, 2=Muslim, 3=Buddhist, 4=Hindu,  
5=Ethnic, 6=Marxist, 7=Others  
8. bars Number of vertical bars in the flag  
9. stripes Number of horizontal stripes in the flag  
10. colours Number of different colours in the flag  
11. red 0 if red absent, 1 if red present in the flag  
12. green same for green  
13. blue same for blue  
14. gold same for gold (also yellow)  
15. white same for white  
16. black same for black  
17. orange same for orange (also brown)  
18. mainhue predominant colour in the flag (tie-breaks decided by taking  
the topmost hue, if that fails then the most central hue,  
and if that fails the leftmost hue)  
19. circles Number of circles in the flag  
20. crosses Number of (upright) crosses  
21. saltires Number of diagonal crosses  
22. quarters Number of quartered sections  
23. sunstars Number of sun or star symbols  
24. crescent 1 if a crescent moon symbol present, else 0  
25. triangle 1 if any triangles present, 0 otherwise  
26. icon 1 if an inanimate image present (e.g., a boat), otherwise 0  
27. animate 1 if an animate image (e.g., an eagle, a tree, a human hand)  
present, 0 otherwise  
28. text 1 if any letters or writing on the flag (e.g., a motto or  
slogan), 0 otherwise  
29. topleft colour in the top-left corner (moving right to decide   
tie-breaks)  
30. botright Colour in the bottom-left corner (moving left to decide   
tie-breaks)