Biostatistics

a) The plot shows a feature space of two predictors (x_1, x_2).and splits leading to a partioning of the feature space

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```
      |                         |
   K        K          |      M
      K  F             |    M
               K       |     F
X₂ 1 |-----------------|            M
      F    F      F    | M
               K       |   M
          F       K    |  F
      F               M        M
```

$$X_2 \quad 1$$

$$1$$

$$X_1$$
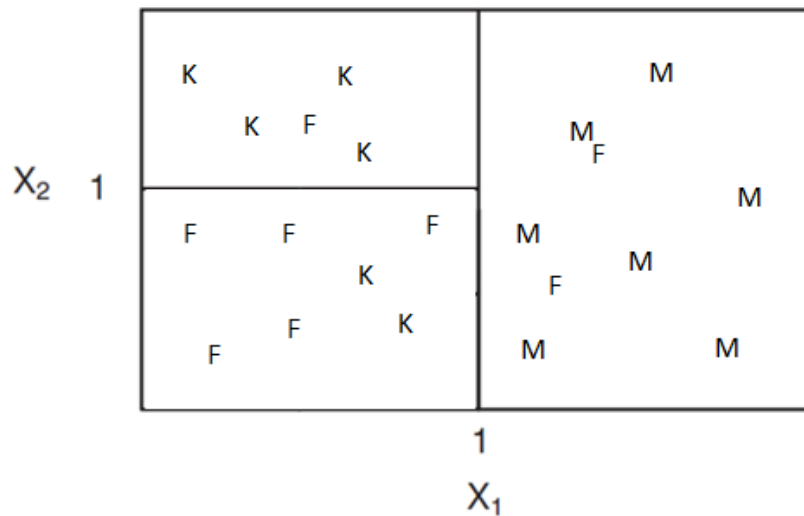
(i)   Sketch the corrsponding classification tree

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```
                X1<=1
           ja /       \ nein
            /           \
        x2<=1           ( M )
      ja /    \ nein
       /        \
    ( F )      ( K )
```
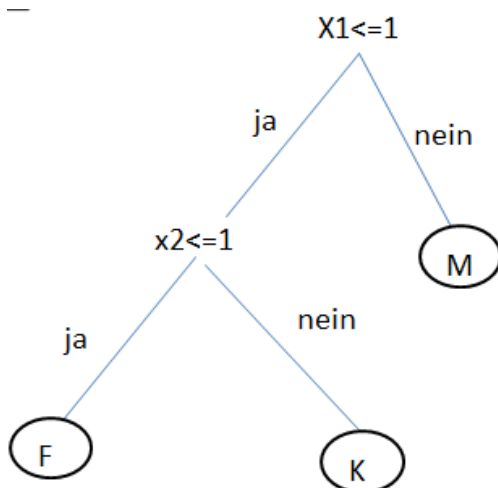
(i)   Determine the corresponding confusion matrix and calculate the accuracy
        (also known as classfication rate).

	Predicted M	Predicted F	Predicted K
True M	7	0	0
True F	2	5	1
True K	0	2	4

$$\text{Accuracy} = \frac{7+5+4}{7+5+4+2+2+1} = 76\%$$