Script Instructions for MaZda 4.5

LoadImage *file_path_and_name* – loads an image for analysis from a given file,
LoadROI *file_path_and_name* – loads regions of interest from a given file,
LoadOptions *file_path_and_name* – loads options from a given file,
LoadReport *file_path_and_name* – loads a report into the report window,
ColorChannel *[arg = Y, R, G, B, U, V, H or S]* – selection of color conversion mode,
ReloadImage – reloading an opened image
RunAnalysis – starts the analysis process,
Execute *file_path_and_name argument_list* – executes program from a given file,
AggregateReports – joins data from two reports,
SaveImage – saves an opened image,
SaveSelected *file_path_and_name* – saves selected features to a given file,
SaveReport *file_path_and_name* – saves report from opened tab-page of report window to a given file,
SaveMap *file_path_and_name* – saves feature map from opened tab-page to a given file,
CloseReport – closes opened tab-page of report window,
CloseMap – closes opened tab-page of feature map,
Exit – unconditional MaZda termination.

For *$variable constant1 constant2* … – starts a loop for constants list,
For *%variable expression_with_wildcards* – starts a loop for files matching the expression,
End – ends a loop started with a For statement,
ChDir *directory_name* – changes a current directory,
ForcePrefix *prefix* – adds prefix to feature names on a following analyses,
FeatureSelection *[arg = Fisher, Poeacc, Mutual, Singles, Pairs, Triplets, Mipaf]* – starts feature selection procedure,
RenameRoi *roi_index new_class_name* – assigns class name to a ROI of a given index,

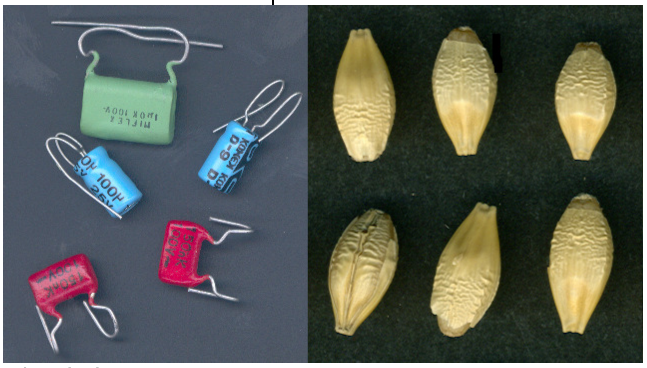
/ or **;** - starts a comment line

Example 1

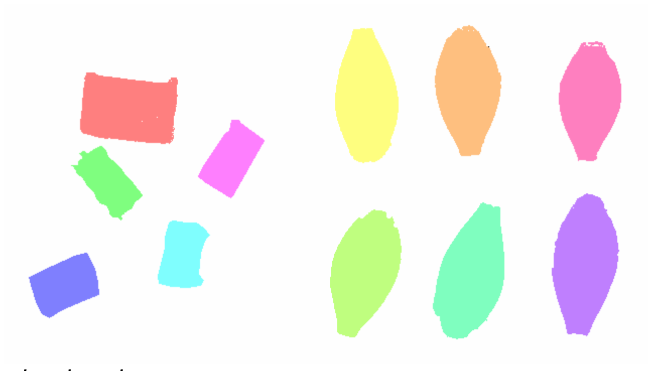
The example script
loads image file *elgrain.bmp* from current directory,
loads regions of interest from *elgrain.roi* file,
defines names (classes) of regions (there are two classes *Capacitor* and *Grain* defined),
loads sets of options from *auto.ini* file,
performs analysis and
selects most discriminative features with Fisher criterion.

```
      LoadImage elgrain.bmp
      LoadRoi elgrain.roi
      RenameRoi 1 Capacitor
      RenameRoi 2 Capacitor
      RenameRoi 3 Capacitor
      RenameRoi 4 Capacitor
      RenameRoi 5 Capacitor
      RenameRoi 6 Grain
      RenameRoi 7 Grain
      RenameRoi 8 Grain
      RenameRoi 9 Grain
      RenameRoi 10 Grain
      RenameRoi 11 Grain
      LoadOptions auto.ini
      RunAnalysis
      FeatureSelection Fisher
```

Files used in the example:



elgrain.bmp



elgrain.roi

Example 2

The example script
loads sets of options from *auto.ini* file from current working directory,
changes current directory to `.\images\`,
in a loop defined for three variables: ima1, ima2 and ima3

    loads image ima1.raw
    loads region of interest from ima1_roi.roi
    runs analysis
    saves report to file ima1_rep.par

repeats for ima2

    loads image ima2.raw
    loads region of interest from ima2_roi.roi
    runs analysis
    saves report to file ima2_rep.par

repeats for ima3

    loads image ima2.raw
    loads region of interest from ima2_roi.roi
    runs analysis
    saves report to file ima2_rep.par

ends loop

```
LoadOptions auto.ini

Chdir .\images\
For $file ima1 ima2 ima3
      LoadImage $file.raw
      LoadROI $file_roi.roi
      RunAnalysis
      SaveReport $file_rep.par
End
```

<u>Example 3</u>
The example script
loads sets of options from *auto2.ini* file from current working directory,
in a loop it searches current directory for image files matching the wildcard *A*.bmp*,
    loads the image brightness channel and runs analysis,
    loads the image U channel, runs analysis and joins two reports together,
    loads the image V channel, runs analysis and joins two reports,
ends loop
In result are generated reports, one per image, each report including features computed for brightness, U and V channel of image.

```
LoadOptions auto2.ini

For %file A*.bmp
      LoadImage %file
      RunAnalysis

      ColorChannel U
      ReloadImage
      RunAnalysis
      AggregateReports

      ColorChannel V
      ReloadImage
      RunAnalysis
      AggregateReports
End
```

Example 4

The example script saves image to a *temp.bmp* file and then runs *mspait* program on the saved image.

```
SaveImage temp.bmp
Execute mspaint temp.bmp
```