CuckooAPI

```
cuckoo_monitor(file)

  CuckooAPI(file)
  Report <- Cuckoo/Storage/Analyses/latest/reports
  Check the Hash and the score from info section
  Global Latest_score <- ["info"]["score"]
```

ChatMD client

```
client()

  connect(serverip,port)
  create_user()
  create_chatroom()
  command<-user gives command
  if command has whohas
     rb_to_png(file)
     output <- ML_Model(file)
  if command has getfile and output not benign
     Block file transfer
     Malware detected
  elseif command has getfile and output is benign
     cuckoo_monitor(file)
      if latest_score greater than 1
         block file transfer
         malware detected
      else
         Send the file
```

rb_to_png

```
rb_to_png(file,directory)

      open(filename,mode<-binary)
      Length <- filesize
      Width <-256
      Remainder= length%width
      Array <- unsigned char of grayscale bits with border of
                                                    (length-remainder)
      v<-Convert array to 8 bit vector
```

```
      save(file,v)
```

ML_Model

```
Procedure Model()

Import the fast.ai libraries and torch
Fetch the data_bunch of malware families and benign files from their
respective folders:
            Learner ← Initialize the resnet34 model with optimizer as
accuracy
            Repeat for 10 epoch cycles for the data_bunch
                  Learner ← Train and optimize on accuracy
            New_learning rate ← 10-2 and 10-3
            Repeat the for 10 epoch cycles for the New_learning rate
                  Learner ← Train and optimize on accuracy
            Pickle_file ← learn.export(trained.pkl)
                  Return the Pickle_file
End procedure
```

ML_API

```
Procedure API(input_image)
      input _image accepted on flask-server as form input
      Trained.pkl ← Fetch the pickle file from Model()
      Family ← Run Trained.pkl for the given input_image
      If the Family is benign
            Return "Benign"
      Else
            Return "Malware and family is" + Family
End procedure
```