camera

- camID :
+ start capture()
+ capture frame()

face detector

+ detect face()

emotion model

- emotion label :
+ predict emotion()
+ display emotion()

Diagram: class diagram Page 1

initialize camera → capture face → detect face → display emotion → loop continuously

```
        ● (start)
          │
          ▼
   ┌─────────────────┐
   │ initialize camera│
   └─────────────────┘
          │
          ▼
   ┌─────────────────┐
   │  capture frame  │
   └─────────────────┘
          │
          ▼
   ┌─────────────────┐
   │   detect face   │
   └─────────────────┘
          │
          ▼
         ◇ face detected?
    no ◄─┤
         │ yes
         ▼
```

initialize camera

capture frame

detect face

no

capture next frame

face detected?

yes

analyze emotion

display

: user   **: Camera**   **: detector**   **: system**

1: start camera()

2: detect face()

3: predict emotion()

4: display emotion()

: useR

: system controller

: display screren

1: start camera()

2: capture()

3: detect face()

: camerA

: face detectoR

4: detect emotion()

: emotion Model

real time emotion detection with camera

cam

start capture

capture frame

Face detector

detect face

Emotion model

diaplay emotion

user

start camera

capture frame

detect face

analyze emotion

AI Emotion model

display emotion

real time emotion detection from camera

camera

face detection

display

real time emotion detection with camera

camera

face detection

display

Diagram: deployment diagram Page 1