Context Login:

    inv: if Self.Clients.all_clients -> select(Client) -> notEmpty() then
        username = Client.username
        pwd = Client.pwd
        current_client = Self.Clients.all_clients -> select(Client)
        if current_client.username == username then
          if current_client.pwd == pwd then
              type = LoginType.Client
          else
             current_client = nul
          endif

        else
          current_client = nul
        endif

      endif

      inv: if Self.Employees.all_employees -> select(Employee) -> notEmpty() then
        username = Employee.username
        pwd = Employee.pwd
        current_employee = Self.Employee.all_employees -> select(Employee)
        if current_employee.username == username then
          if current_employee.pwd == pwd then
              type = LoginType.Employee
          else
             current_employee = nul
          endif

        else
         current_employee = nul
        endif

      endif

inv: (self.Login.updates_info) implies (type = LoginType.Client)

Context Message:

inv : if self.Login -> select(to) -> notEmpty() then
          store = false
          self.Message.sends
     else

```
            if self.Employees.all_employees -> select(to) -> notEmpty() then
                    store = true
            else
                    store = false
            endif
        endif


inv: if (Login.type = Employee && self.Message.store == true) then
                self.Chat.gets
        endif
```

Context Invoice:
```
        Inv: if limit_to_pay == 3 then
                Self.SMTP.to = Client.Email Address
                Self.SMTP.from = Email
                Self.SMTP.content = "Payment reminder, days left: self.limit_to_pay
                                        , invoice number: self.Invoice.id""
                Self.SMTP.sends.EMAIL

            Endif
```

Context Report :
```
        inv: If (Date.day == 01) then
                self.Clients.all_clients -> forAll(c:Client)
                        self.SMTP.to = c.EMAIL
                        self.SMTP.from = EMAIL
                        self.Report.client = c
                        self.Report.customized_content = ""
                        self.SMTP.sends.Report
            endif
```

Context Details Check/Updates:

```
Inv : if (new_email != nul && new_email != self.Login.current_client.Email Address) then
                Self.Login.current_client.EMAIL = new_email
        Endif
```

Inv: if (new_address != "" && new_address != self.Login.current_client.address) then
        Self.Login.current_client.address = new_address
    Endif

Inv: if (new_phone != "" && new_phone!= self.Login.current_client.phone) then
        Self.Login.current_client.phone = new_phone
    Endif