**Security of Computer Systems**

**Project Report**

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Version: 1.2

**Versions**

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| --- | --- | --- |
| Version | Date | Description of changes |
| 1.0 | 08.04.2025 | Creation of the document. |
| 1.1 | 08.04.2025 | Added pictures. |
| 1.2 | 09.04.2025 | Filling parts necessary to pass control term. |

1. **Project – control term**
   1. ***Description***

The main aim of this project is to create an app which will allow user to sign and verify the PDF document signage. Also, app has to allow user to generate a pair of RSA keys to make all operations possible.

* 1. ***Results***

App was created in Python with usage of PyQT5 UI library. App is also available via TUI, which was created earlier in the process.

App consists of 3 functional parts:

1. Key management (fig. 1)

Here, user can set paths to private and public keys. Colours of the text next to textboxes are signalising if keys are present in given places. Also, here user sets paths where new keys will be stored.

When user set paths, user is asked to enter the password to unlock access to files or to create new set of keys. If password is incorrect, user is asked again. Field to enter the password is placed in popup window (fig. 3).

1. Document signing (fig. 1)
2. Document verifying (fig. 2)

Obraz zawierający tekst, zrzut ekranu, oprogramowanie, wyświetlacz

Zawartość wygenerowana przez sztuczną inteligencję może być niepoprawna.

*Fig. 1 – App main screen.*

*Obraz zawierający tekst, zrzut ekranu, oprogramowanie, wyświetlacz

Zawartość wygenerowana przez sztuczną inteligencję może być niepoprawna.*

*Fig. 2 – Signature verifying screen.*

* 1. ***Summary***

Application works in expected way. All critical methods are implemented using *try… except* mechanism to handle errors during its execution.

1. **Project – Final term**
   1. ***Description***

Content

* 1. ***Code Description***

Content

|  |
| --- |
| /\*!  \* A list of events:  \* <ul>  \* <li> mouse events  \* <ol>  \* <li>mouse move event  \* <li>mouse click event<br>  \* More info about the click event.  \* <li>mouse double click event  \* </ol>  \* <li> keyboard events  \* <ol>  \* <li>key down event  \* <li>key up event  \* </ol>  \* </ul>  \* More text here.  \*/ |

*List. 1 – Code listing [2].*

Final Content.

* 1. ***Description***

Content

* 1. ***Results***

Content

* 1. ***Summary***

Content

1. **Literature**

[1] <https://en.wikipedia.org/wiki/PAdES> [accessed on 08.04.2025]

[2] Project instruction.