# Project 1 For the course FYS3150

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## 1 Abstract

#### 2 Introduction

All programs are found at our GitHub-repository.

- 3 Method
- 3.1 Exercise a)
- 3.2 Exercise b)
- 3.2.1 Calculations

Det under som ikke er mulig å lese blir kommentert ut: Ferdig kommentert ut.

- 3.2.2 The programming
- 3.3 Exercise c)
- 3.3.1 Calculations
- 3.3.2 The programming
- 3.4 Exercise d)
- 3.4.1 Calculations
- 3.4.2 The programming
- 3.5 Exercise e)
- 3.5.1 Calculations
- 3.5.2 The programming

#### 4 Results and discussion

Our results are as shown in the Appendix. We also have .txt-files for all the raw data generated by the projects up on GitHub.

- 4.1 Exercise a)
- 4.2 Exercise b)
- 4.3 Exercise c)
- 4.4 Exercise d)
- 4.5 Exercise e)

# 5 Conclusion and perspective

# 6 Appendix

# 7 References

Our GitHub-repository.

Link to lecture slides in FYS3150 - Computational Physics. See page 168 and the rest of chapter **6.4 Linear Systems** for theory behind the tridiagonal matrix algorithm.