Group Project Report

A smart flight check-in kiosk ——developing the software using Agile Methods

by

Designed by group 106

Student Name	Student Number
First Surname	1234567

Instructor:	I. Surname
Teaching Assistant:	I. Surname
Project Duration:	Month, Year - Month, Year
Faculty:	Faculty of Aerospace Engineering, Delft

TU Delft

Preface

A preface...

Designed by group 106
Delft, May 2022

Summary

A summary...

目录

Nomenclature

If a nomenclature is required, a simple template can be found below for convenience. Feel free to use, adapt or completely remove.

Abbreviations

Abbreviation	Definition
ISA	International Standard Atmosphere
...	

Symbols

Symbol	Definition	Unit
V	Velocity	[m/s]
...		
ρ	Density	[kg/m^3]
...		

1

Agile Project Management

During the development of our smart flight check-in kiosk, we adopted agile project management and use “Scrum Approach” to manage the iterative development. The whole Scrum process is roughly divided into the following three phases:

1. **Plan and Design:** In this part, we selected our Scrum Master, wrote user story, product backlog, and completed prototype design.
2. **Development phase:** In this part, we followed a series of Sprint Cycles, where each cycle developed a version of working software during 2 weeks.
3. **Product release:** In this part, we checked our project against the requirements and wrapped up our project by writing reports, user manuals, etc.

图 **1.1:** Sprint Cycle

1.1. First phase: Plan and Design

1.1.1. Project planning and scheduling

1.1.2.

2

About the Template

This template aims to simplify and improve the (Xe)LaTeX report template by Delft University of Technology. Some of the main features:

- **Simplicity First:** A class file that has been reduced by nearly 70% to simplify customization;
- **Effortless:** A careful selection of common packages to get started immediately;
- **Complete:** Ready-to-go when it comes to the document and file structure.

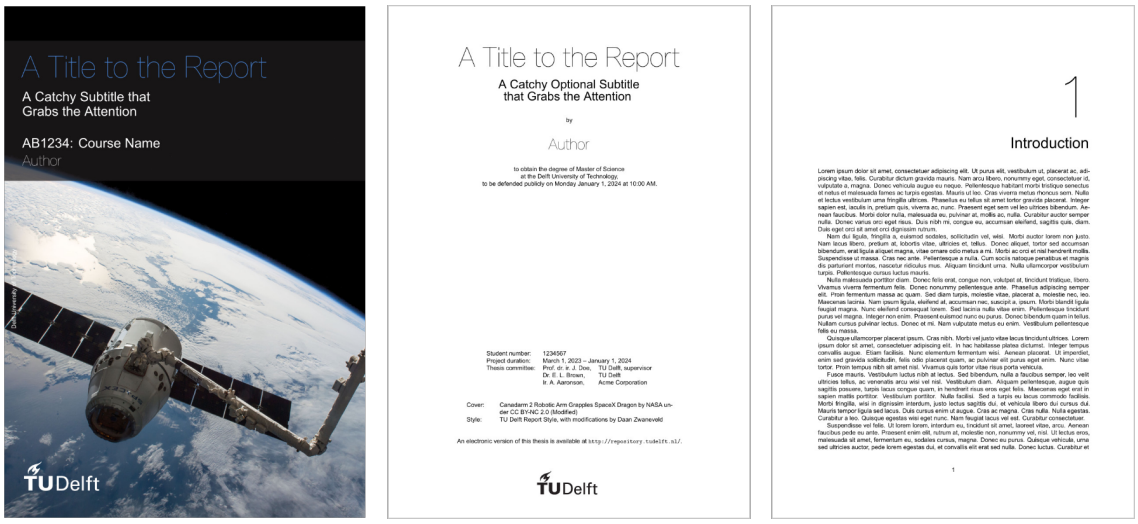


图 **2.1:** Preview of the template

License

3

Analysis and Design

3.1. Project Architecture

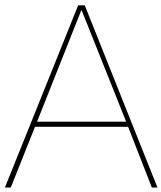
3.2. Design Principles

3.2.1. Single Responsibility Principle (SRP)

4

Conclusion

A conclusion...



Source Code Example

```
"""
ISA Calculator: import the function, specify the height and it will return a
list in the following format: [Temperature,Density,Pressure,Speed of Sound].
Note that there is no check to see if the maximum altitude is reached.
"""

import math
g0 = 9.80665
R = 287.0
layer1 = [0, 288.15, 101325.0]
alt = [0,11000,20000,32000,47000,51000,71000,86000]
a = [-.0065,0,.0010,.0028,0,-.0028,-.0020]

def atmosphere(h):
    for i in range(0,len(alt)-1):
        if h >= alt[i]:
            layer0 = layer1[:]
            layer1[0] = min(h,alt[i+1])
            if a[i] != 0:
                layer1[1] = layer0[1] + a[i]*(layer1[0]-layer0[0])
                layer1[2] = layer0[2] * (layer1[1]/layer0[1])**(-g0/(a[i]*R))
            else:
                layer1[2] = layer0[2]*math.exp((-g0/(R*layer1[1]))*(layer1[0]-layer0[0]))
    return [layer1[1],layer1[2]/(R*layer1[1]),layer1[2],math.sqrt(1.4*R*layer1[1])]
```

B

Task Division Example

If a task division is required, a simple template can be found below for convenience. Feel free to use, adapt or completely remove.

表 **B.1:** Distribution of the workload

	Task	Student Name(s)
	Summary	
Chapter 1	Introduction	
Chapter 2		
Chapter 3		
Chapter *		
Chapter *	Conclusion	
	Editors	
	CAD and Figures	
	Document Design and Layout	