



# CProg-ng

B-TCS Design Project - Group 12

Supervisor:

ir. D. M. Abeln

Our Team:

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C Programming Hand-In
Home Group Hand In Help Logout

## Assignment Results

Overview of results for Marki-Pleym, S. (Sander, Student B-TCS)

Assignment	Score	Results
1.3	0.00 pt	None
1.4	0.00 pt	None
2.12	0.00 pt	None
3.3	0.00 pt	None
3.4	0.00 pt	None
3.6	0.00 pt	None
4.3	0.00 pt	None
4.6	0.00 pt	None
4.8	0.00 pt	None
5.2	0.00 pt	None

### Grade

Your grade based on the current handed in assignments is: 0.00 / 10.00 points.

### Legend

None	No assignment handed in yet
<span style="background-color: green; color: white; padding: 2px;">OK</span>	Assignment correct and accepted
<span style="background-color: orange; color: white; padding: 2px;">IN PROGRESS</span>	Assignment will be checked shortly
<span style="background-color: red; color: white; padding: 2px;">NOT OK</span>	Assignment contains errors
<span style="background-color: green; color: white; padding: 2px;">OK</span>	Group assignment correct and accepted**
<span style="background-color: orange; color: white; padding: 2px;">IN PROGRESS</span>	Group assignment will be checked shortly
<span style="background-color: red; color: white; padding: 2px;">FAILED</span>	Group assignment contains errors

\* Supervisor has overridden this assignment result, see the assignment for more details.  
 \*\* Course rules apply; this page only checks assignment correctness. Handing in individual assignments as a group or changing groups without permission can invalidate results shown.

### Assignment 1.3: Temperature scales

Write a program which calculates, for a given temperature in °C, the corresponding values in K and in °F. Use a variable of type *double*. Afterwards, print the results to the standard output.

#### Input

A temperature in °C (type *double*).

For example:

10

#### Output

On the first line the letters C, K and F, and on the second line the temperatures in different scales. The temperatures must be printed accurate to two decimals after the point. The entries of both lines must be separated by tabs (no spaces). Both lines must end with a newline.

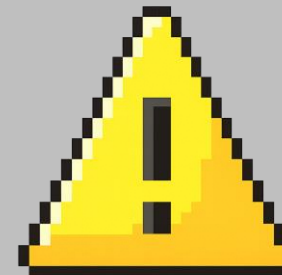
For example:

```
C      K      F
10.00 283.15 50.00
```

## PROBLEMS & SHORTCOMINGS



- **Hard to maintain**
- **Hard to change assignments**
- **Non-standard login method**
- **No separation between iterations**
- **Checker on a CRON job**
- **Hardcoded roles**



# REQUIREMENTS



The system **MUST**...

- Allow administrators to manager users.
- Enforce permission-based access control.
- Display submission results, including compilation errors, runtime errors, and test results.
- Support group-based assignments.

...

The system **SHOULD**...

- Allow the exporting of grades.
- Support modular checker steps.
- Have a memory analysis step in the checker.
- Provide a user-friendly interface to the user.
- Be containerized for portability.

...

The system **COULD**...

- Support customizable themes.
- Support configurable grading rules.

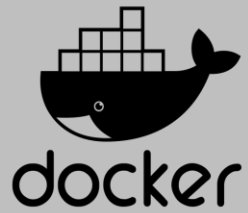
...

The system **WILL NOT**...

- support plagiarism detection.
- provide dedicated mobile support.

...

# TECH STACK



docker  
DEPLOYMENT

NEXT.JS

FRONTEND



FRONTEND



PostgreSQL

DATABASE



Nest JS

BACKEND

./ nsjail

PROCESS ISOLATION



- Components
- Themes
- Data Fetching
- Rendering based on Permissions

## CProg Light

Primary Secondary Create Edit Delete < Back Custom

## CProg Dark

Primary Secondary Create Edit Delete < Back Custom

## Win95 Classic

Primary Secondary Create Edit Delete < Back Custom



- Rest API
- Authentication
  - Local or SSO
- Checker (more later)
- Pagination
- Server-Sent Events (SSE)





- System Management
- Course Management
- User Management
- Audit Logs

CProg Admin
admin@cprog-ng.local

**NAVIGATION**

- Users
- Courses & Assignments
- Submissions
- Grading
- Notifications
- Audit Logs

**PAGES**

- System Settings
- System Documentation
- Course Builder
- Course Archiver
- Archive Manager
- Add Users
- Role Templates Editor

Welcome to the Admin Dashboard

**System Overview**

This central dashboard provides an overview of the platform's system. From here, you can monitor and manage the database resources directly, see the Activity Log (Audit Log) and create new course content for the system.

**Quick Actions:**

Use the shortcuts below to jump directly into course creation, system-wide settings, or access the full documentation.

Course Builder
 System Settings
 Help

System Status

Maintenance Mode	Disabled
Code Checker	Enabled

[View All System Settings](#)

Brief Resource Overview

User	11
RoleTemplate	4
Course	4
Submission	5
Announcement	0

Recent Activity Logs

Date	User	Action
19/04/2026, 11:22:15	user:605e9f08-aa1a-49ce-b808-2a7224a09409	user.login on User
19/04/2026, 11:08:06	user:00783ad9-120d-41cd-abbfe35097a068a4	user.login on User
19/04/2026, 10:41:14	user:00783ad9-120d-41cd-abbfe35097a068a4	user.login on User
17/04/2026, 14:37:49	twan@twankuipers.nl	delete on Course
17/04/2026, 14:37:25	twan@twankuipers.nl	buildCourse on Course
17/04/2026, 14:30:21	user:00783ad9-120d-41cd-abbfe35097a068a4	grading.completed on Submission

New System Announcement

Broadcast a message to all users across the platform.

**TITLE**

**MESSAGE**

Describe the announcement in detail...

[Publish Announcement](#)

[View All Announcements](#)

**CHAIN OF RESPONSIBILITY**

1. TmpDirStep
  2. DownloadStep
  3. UnzipStep
  4. FileUsageCheckStep
  5. AssetIntegrityStep
  6. CompileStep
  7. AssetInjectionStep
  8. UnitTestStep
  9. ValgrindStep
  10. CleanupStep
- SETUP
- TESTS



Welcome back, Student 1!

### Seed Assignment Set 1 Mandatory

This assignment set counts for 50% of your final grade

0/20 points Progress bar Current grade: 1

Assignment	Score	Attempts	Latest
Hello World Assignment	- / 10	0	N/A
Hello World Group Assignment	- / 10	0	N/A

### Course Grade



### Seed Assignment Set 2

This assignment set counts for 50% of your final grade

0/21 points Progress bar Current grade: 1

Assignment	Score	Attempts	Latest
Hello World Required Assignment 1 <span>Required</span>	- / 10	0	N/A
Hello World Required Assignment 2 <span>Required</span>	- / 10	0	N/A
Hello World Optional Assignment	- / 1	0	N/A

### Group Info

Group: No Group

## CONCLUSION



Did we succeed?

- Preserve the core functionality
- Fix problems and shortcomings of the old system
- More secure and maintainable
- Automated testing
- Remaining limitations: mobile support, plagiarism, hidden comments, role precedence



YIPPEE!



Start

THE END

A fatal exception 3ND has occurred at slide:12 in this presentation. The presentation will be terminated.

- Ask any question you still have,
- or not?

Thank you for your time.

Press any key to continue