Acceptance Test

Review for Team: <Group-1-Team-3 / g1t3>

Review-Team: <Group-1-Team-2 / g1t2>

Member1:(Christina Brückl, 01219643)
Member2:(Leonie Katharina Geyr, 11778679)
Member3:(Thomas Krabichler, csaw4217)
Member4:(Kevin Rimml, 12036261)
Member5:(Ioannis Deligiannidis, 11913541)

Proseminar Group: <PS-Group-1>
Date: 01/06/2022

1. Summary

Positive and negative experience from a view of a User as Tester:

Positives:

Very nice GUI. Simple, very accurate and self-explained. The system performance is quite good, In fact, some tests has been tested with few data, namely the one that's already initialized in the data.sql. The diagrams are easy to understand and not too big. The code for the IP address was easy to install and code quick to alter it.

Negatives:

The Test script misses instruction of how-to setup the programs or how to install. There are more READ MEs in the project itself. But not in a bundle rather you must search for them. Not productive. After 5h+ the program could be installed and runs, but the process is rather stress-ful 😅

About the Test-Script

Test-Script:

From a positive view, the test script is written in a nice and understandable way. It also had some small issues, but in the summary all basic test cases have been covered. Special test cases are not covered in that yet.

But there are instructions missing. Test cases regarding security are not always holding. Cases have xyz, that's not what we want to have, if someone have to test something, that lets things open for interpretation. But as this is not the final product, the project has a lot of space to improve.

Strengths and weaknesses of the system:

Strengths: *The overall structure of the site is good and very user-friendly. Each implemented functionality is easy to find without further explanation. Diagrams are very accurate without the use of any switches to change the timeframe which is easy to understand for users. Further there were no runtime errors while executing the application (in each tested functionality)*

Weaknesses: *Application was not executable right away in an easy way, several problems regarding installation and compiling were frustrating from the view of the tester because of missing concrete instruction on how to set up the system to be executable.*

Regarding the frontend, the "responsive design" of the application in different web browsers could have been implemented in a nicer way. (Menu, font-size, and size of diagrams are not scaled to the size of the screen)

Many "side" test cases which may or should be covered, e.g., Non authenticated Users can access several webpages from the URL, where they do not supposed to.

2. Functionality

(🟩 *= requirement fulfilled,* 🟨 *= requirement "50-50" fulfilled,* 🟥 *= requirement not fulfilled)*

The needed functionalities like defined in the concept were the following

- *Temperatur, Luftfeuchtigkeit, Luftqualität, Lärmbelastung und Lichtintensität werden in verschiedenen Räumlichkeiten des Gebäudes überwacht*
- *Daten zum Raumklima des Gebäudes sollen längerfristig gesammelt werden*
- *längerfristigen Auswertungen müssen datenschutzkonform erfolgen*

Comment:

Data privacy requirements only partially met, individual pages can be viewed without authorization

- *Für die Auswertungen in der Webapplikation sollen folgende Informationen zu einem Raum zentral gespeichert werden:*

- o *Raumtemperatur*
- o *Luftfeuchtigkeit*
- o *Luftqualität*
- o *Lärmpegel*
- o *Lichtintensität*
- *Zeitstempel für jeden Sensormesswert*
- *Die Grenzwerte für Temperatur, Luftfeuchtigkeit, Luftqualität, Lärmpegel und Lichtintensität müssen für jeden Raum individuell konfigurierbar sein.*

Comment:
Limit values can be configured, but not for each room but for each sensor

- *Die Gebäudeadministration übernimmt die Konfiguration der Grenzwerte.*
- *Außerdem hat die Gebäudeadministration die Möglichkeit, über die Webapplikation neue Arduino-Sensor Stationen am Minicomputer eines Raumes zu registrieren bzw. zu entfernen.*

No additional sensors can be detected within the application

- *Der Abteilungsleitung der Firma, sowie dem höheren Management und den Gebäudeadministratoren sollen kumulierte Raumklimaanalysen zu Verfügung stehen.*
- *Folgende Analysen sollen datenschutzkonform pro Benutzer-Rolle angeboten werden:*
MitarbeiterIn:
  - o *Daten des eigenen Büros*
  - o *Daten aus Konferenzräumen und Aufenthaltsräumen der eigenen Abteilung*
  - o *Tages-, Wochen-, und Monatsansicht*
  - o *In Form von geeigneten Diagrammen und weiteren sinnvollen Visualisierungen*

  Abteilungsleitung
  - o *Kumulierte Daten aller Räumlichkeiten der gesamten Abteilung*
  - o *Daten aller Räumlichkeiten, die der Abteilung zugeordnet sind*
  - o *Tages-, Wochen-, und Monatsansicht*
  - o *In Form von geeigneten Diagrammen und weiteren sinnvollen Visualisierungen*

  Höheres Management und Gebäudeadministration
  - o *Kumulierte Daten jeder Abteilung*
  - o *Daten aller Räumlichkeiten der Firma*
  - o *Tages-, Wochen-, und Monatsansicht*

- *Folgende Features werden zusätzlich erwartet:*
  - o *Abwesenheiten*
  - o *User sollen die Möglichkeit haben, Urlaub, Krankenstand etc. im System zuhinterlegen*
  - o *Diese Abwesenheiten müssen in der Datenauswertung berücksichtigt werden*
  - o *Insbesondere dürfen die Daten der betreffenden Räumlichkeiten unter Umständen nicht in die Analyse einbezogen werden*
  - o *Aktive User sollen sich für E-Mail Benachrichtigungen anmelden können*
  - o *Wenn aktiviert erhalten die User in einem individuell bestimmbaren Intervall (z.B. täglich, wöchentlich, monatlich, …) einen Raumklimabericht als E-Mail*
  - o *Datenschutz*

__Comment:__

Data protection requirements are only partially met, individual pages can be viewed without authorization

- o   *Achten Sie im Besonderen auf die korrekte Umsetzung der Zugriffsrechte und des notwendigen Rollenkonzeptes*
- o   *Achten Sie bei der Datenanalyse darauf, dass keine Rückschüsse auf einzelne Personen gezogen werden können*
- o   *Audit-Log*
- o   *Besondere Umstände sind in einem (nachträglich) unveränderbaren Audit-Logeinzutragen. Dies betrifft zumindest alle Änderungen von Benutzerdaten und deren Rollen, Konfigurationsänderungen von Sensorgrenzwerten, Hinzufügen und Entfernen von Sensorstationen, sowie An- und Abmeldungen*

__Comment:__

It is generally not possible to add or remove sensor stations;
New creation of users is not recorded in the audit log, changes are recorded.

Folgende Daten sind zu speichern:
- ▪   *Datum und Zeit*
- ▪   *Benutzer*
- ▪   *Ereignis*

Data exchange with other systems

1. *IP address could be changed easily, after short notice from g1t3*
2. *Bash scripts for an easy run of pi code did work*
3. *Schema for Arduino was good to follow and easy to do*
4. *Minicomputer could not be registered, so further test where not possible in regards to miss functionality of the hardware*

3. Performance, Error tolerance and Stability

Does the system react appropriately to error states (e.g. restart of the minicomputer, short-term failure of communication between the minicomputer and the central backend, etc.)?

1. *Minicomputer was registered by the backend but was blocked*
2. *Check for different minicomputers with different settings is needed*

Systems response behavior

The system behavior reacts good, and it is good from the performance point of view (Under the facts that the system has been not fulfilled with data). The response time is quick, and it reacts nice by empty or wrong inputs from the user.
Although there are some small things which could be covered or fixed, so that the system stays stable.

1. User Editing and Self editing
   - Multiple users can have the same email address?
   - Can each user change its own department and room by himself?
   - On own account delete, no password, email, or any other mechanism to check required before deleting the current account?
   - On own password change, every user without knowing the password of the current logged in user can change the password. No mechanism of enter the current password, email notifications or similar.

2. New User Add
    - Can a new user be assigned to the Toilet as working place?
    - Can a new user be assigned to any room, independent of the department?
    - Can a new user have the same email as an already existing user in the system?
    - By adding a new user or moving a user from a room to another, there is no check if the rooms capacity have been exceeded. Users can be assigned to a full room. 😊

4. Privacy

Correctness of access rights implementation

Access rights are partially correct. An employee can access any route and view it which he shouldn't. For example: http://localhost:8080/users ,http://localhost:8080/departments can be accessed by just entering the URL. The employee can't modify information though, but it can see them.
The insurance that specific evaluations and evaluation periods are only available to the designated user groups it is ok! So, each user only sees the correct offices.

5. Usability

The usability of the system is very simple. All buttons and headers are clearly shown, so there is no "hidden" functionalities. The environment is a User Friendly and nice to work.

6. Test-Script

About the Test-Script. We tested all the test cases as described in the Test-Script and in the columns, we wrote our observations, how understandable or clear were the test steps written and the observed deviation. See the next site below:

TEST CASES	UNDERSTANDABLE TEST - DATA	REUSABILITY/ON TESTING OBSERVATIONS	OBSERVED DEVIATION
TC Auth1.1: Login Nutzer	Instead of: XYZ URL use the real url like Localhost:8080 e.g. Nutzer1 and password1 does not exist	OK	OK
TC Auth1.2:Login Nutzer (Falsches passwort)	Instead of: XYZ URL use the real url like Localhost:8080 e.g. Nutzer1 and password1 does not exist	OK	OK

TC Auth1.3: Login deaktivierter Nutzer	Instead of: XYZ URL use the real url like Localhost:8080 e.g. Otherwise, it is ok!	The message shown is not the expected one	Cosmetic deviation
TC Auth2.3: Logout eingeloggter Nutzer	OK	OK	OK
TC Auth3.1: Eigene Daten ändern	OK	Can each user change its own department and room by hisself? Multiple users can user the same email address?	OK
TC Auth3.2: Eigenes Passwort ändern	OK	Every user without knowing the password of the current logged in user can change the password?	OK
TC Auth3.3: Eigenen Account löschen	OK	No password, email, or any other mechanism to check before deleting an account?	OK
TC Auth4.1. Gültige Abwesenheit eintragen	OK	OK	OK
TC Auth4.2: Abwesenheit mit fehlende/falschen Daten eintragen	OK	Wrong Datetimes wont show as expected.	Cosmetic deviation
TC Auth5.1: Raumklimadaten auslesen		Only test data now.	
TC Auth5.2: Akkumuliertes Raumklimadiagramm auslesen		Missing?	
TC Auth5.3: Datenschutz Raumklimadaten			

TC Auth6.1: Audit-Log Nutzer mit Berechtigung einsehen	OK	OK	OK
TC Auth6.2 Audit-Log Nutzer ohne Berechtigung einsehen	OK	OK	OK
TC Auth7.1: Mit Berechtigung User erstellen	OK	Can a new user be assigned to the Toilet as working place? Can a new user be assigned to any room independent of the department? Can a new user have the same email as an already existing user?	OK
TC Auth7.2: Mit Berechtigung User ändern	OK	Can a new user be assigned to the Toilet as working place? Can a new user be assigned to any room independent of the department? Can a new user have the same email as an already existing user?	OK
TC Auth7.3: Mit Berechtigung User deaktivieren	OK	OK	OK
TC Auth7.4: Mit Berechtigung User löschen	OK	OK	OK
TC Auth7.5: ohne Berechtigung User ändern, deaktivieren oder löschen	„The user is logged in and has the Role Manager or Administrator" is wrong. Administrator can remove an User.	NOT OK, Description have to be changed. Wrong data are given.	NOT OK

TC Auth8.1: mit Berechtigung Räume erstellen	OK	OK	OK
TC Auth8.2: mit Berechtigung Räume anpassen	OK	Select Department „None" does not work yet.	Middle deviation
TC Auth8.3: mit Berechtigung Räume löschen	OK	OK	OK
TC Auth8.4: ohne Berechtigung Räume erstellen, ändern oder löschen	OK	OK	OK
TC Auth9.1: Mit Berechtigung Departments erstellen	OK	Can multiple departments share the same name?	OK
TC Auth9.2: Mit Berechtigung Departments bearbeiten	OK	Can multiple departments share the same name?	OK
TC Auth9.4: Mit Berechtigung Departments lösche	OK	OK	OK
TC Auth9.4: ohne Berechtigung Departments erstellen, ändern oder löschen	OK	OK	OK
TC Auth10.1: Mit Berechtigung Minicomputer anpassen	OK	Should the Manager or Administrator have the possibility to configure the limits over the web application or should the limits be configured and set up by the PI over the rest-controller?	?
TC Auth10.2: ohne Berechtigung Minicomputer anpassen	OK	OK	OK

TC Auth11.1 Raumklimabericht erhalten	OK	Could not be tested.	OK, but localhost:808/ minicomputer is callable but should not be
TC Auth12.1: Design	OK	OK	OK
TC Auth12.2: Stabilität	OK	OK	OK
TC Auth12.3: Eingeschränkte Verfügbarkeit der Hardware	OK	Could not be tested.	?
TC Auth12.4: Ladezeiten	OK	OK	OK

7. Further Abnormalities

Abnormalities or Suggested Improvements

Suggested Improvements:

- *The one command to run the program and the small test cases which could be covered for a more stable system.*
- *For further project and maybe the final submission the instruction file should be revised. Regarding detailed information how to get started on the code. how to installe, what installation is needed and so on*