



System Requirements Specification prepared for Erasmus Club Sevilla

**by IR-ENG-ADT-05 Group Erasmus
Version 0.3
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1 | Introduction

Each semester, more than 1.000 ERASMUS students come to Sevilla in order to experience another culture, improve their Spanish language skills and take part in intercultural activities. The Erasmus Club Sevilla was founded in 2010 and aims to provide Erasmus Students with trips, parties and intercultural activities. At the moment, the interaction with students is mainly hold through the website and through an office situated in Triana. Nevertheless, many other information channels like WhatsApp groups and E-Mail exist in addition to the website and create a rather confusing user experience. It is the goal of this project to improve the communication with the customer (the students) and to provide a centralized, easy accessible and mobile application.



Figure 1: Office of Erasmus Club Sevilla

1.1 Scope

The goal of the project is the development of an application in which the customer can access all information in one central place. The scope of the application will therefore affect the following processes within the organization:

- Customer Relationship Management, including the sign-up for the club, the purchase of the ECS-Card, the communication of changes to the itinerary, the reminder process and the possibility of chatrooms with ECS-responsibles and other club-members
- Customer Order Management, including the payment process, cancellation process, selling process and the order history

1.2 Participants of the Project

This section includes a brief description of the organizations and people that take part in this project.

1.2.1 Participating Organizations

| | |
|--------------|---|
| Organization | Erasmus Club Sevilla |
| Address | C. Pagés del Corro, 137, 41010 Sevilla, Spain |
| Comments | no comments |

| | |
|--------------|--|
| Organization | IR-ENG-ADT-05 |
| Address | Escuela Técnica Superior de Ingeniería Informática, Universidad de Sevilla, 41012 Sevilla, Spain |
| Comments | no comments |

1.2.2 Participating Persons

| | |
|--------------|-------------------------|
| Person | Christina Dsubanko |
| Organization | IR-ENG-ADT-05 |
| Role | Member of IR-ENG-ADT-05 |
| Comments | no comments |

| | |
|--------------|-------------------------|
| Person | Florian Gamillscheg |
| Organization | IR-ENG-ADT-05 |
| Role | Member of IR-ENG-ADT-05 |
| Comments | no comments |

| | |
|--------------|-------------------------|
| Person | Lea Ross |
| Organization | IR-ENG-ADT-05 |
| Role | Member of IR-ENG-ADT-05 |
| Comments | no comments |

| | |
|--------------|-------------------------|
| Person | Agata Socha |
| Organization | IR-ENG-ADT-05 |
| Role | Member of IR-ENG-ADT-05 |
| Comments | no comments |

| | |
|--------------|---------------------------------|
| Person | Nabil Bouazzi |
| Organization | Erasmus Club Sevilla |
| Role | Manager of Erasmus Club Sevilla |
| Comments | no comments |

| | |
|--------------|-------------------------------------|
| Person | Giulia Bono |
| Organization | Erasmus Student |
| Role | Interview Partner for User-Feedback |
| Comments | no comments |

| | |
|--------------|-------------------------------------|
| Person | Giorgia Daraio |
| Organization | Erasmus Student |
| Role | Interview Partner for User-Feedback |
| Comments | no comments |

1.3 Objectives of the project

The main objects achieved by the development of the application are:

- Development of a central place for all information for the users
- Improvement of Sign-up and purchase-of-ECS-Card-process
- Development of a digital ECS-Card
- Establishment of a reminder process for events and trips
- Improvement of cancellation and selling process
- Establishment of an event-history
- Creation of chatrooms to enable and improve communication

2 | Information about the problem domain

2.1 Introduction to the domain of the problem

The ERASMUS (EuRopean Community Action Scheme for the Mobility of University Students) Program is an European exchange program that was established in 1987. As of 2014, the program has allowed over 3.3 million students to participate in a student exchange [1] with increasing popularity. In 2018, the European Union proposed its latest Erasmus program, which receives the double of the budget.

Erasmus allows students to experience different countries in an unbureaucratic way and has become a cultural phenomenon. While also learning, Erasmus enables students to experience new cultures. Since its creation, the program has helped to form an European identity and solidarity among Europe's younger generation (also referred as "Erasmus Generation").

An essential part of the Erasmus experience are parties, events and trips. They are often organised by organisations specifically targeted at Erasmus students, such as the Erasmus Student Network (ESN) and Erasmus Club Sevilla (ECS) which offer events for an affordable price.

On its website [2], Erasmus Club Seville offers information about current events, trips and parties that can directly be reserved and purchased. However, information about the events are often scattered around different platforms, such as What's App, Instagram, and E-Mail, which makes it complicated to follow the current state. In addition to that, currently Erasmus Club does not offer a mobile application to collect all purchased tickets, instead students rely on PDF files, that are sent via E-Mail.

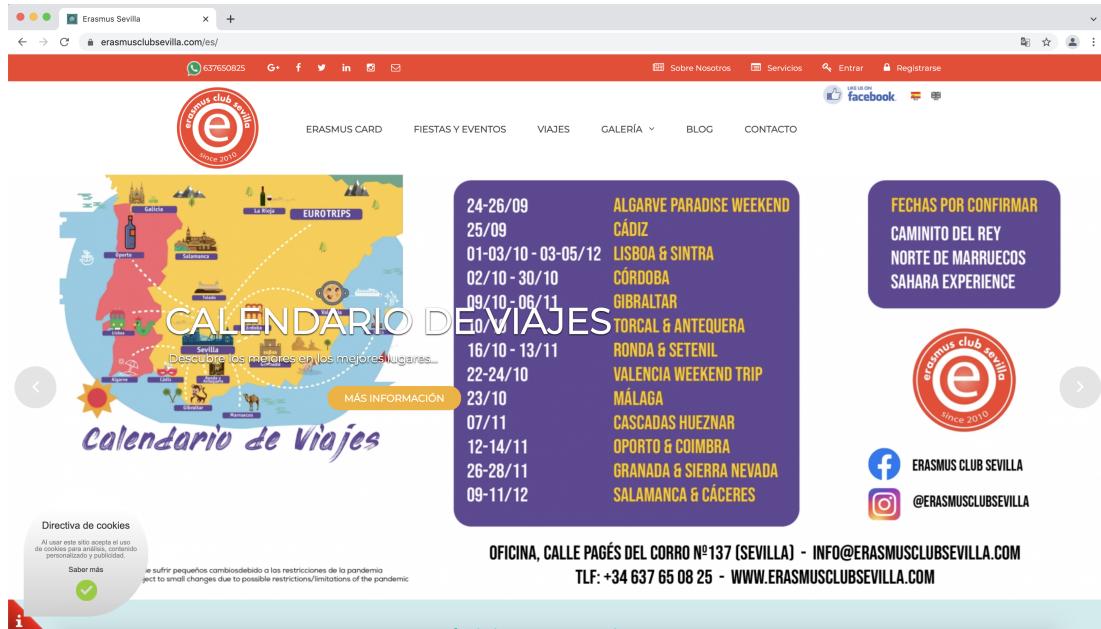


Figure 2: Screenshot from the Erasmus Club Seville Website



Figure 3: Erasmus Club Students on a trip

2.2 Glossary of important terms

Chatroom: Virtual room in the internet that can be used to communicate with other users. Within Erasmus Club Seville, the chatroom should be a place where ECS members can chat with each other, talk about upcoming events and also trade or exchange tickets.

Client: Person or company, to which we, as IR-ENG-ADT-05, offer our services.

ECS: Erasmus Club Seville

Erasmus Club Card: A special discount card by Erasmus Club Seville that can be purchased for 20€ - online or at the office. The card itself, however, must be collected at the office and is valid for a whole year. The Card allows to get discounts for parties, trips & events.



Figure 4: Erasmus Club Card

Erasmus student: A student participating in the Erasmus program.

Event: Event offered by ECS. ECS offers events in various places in Seville. These events can range from get-togethers to various games.

Party: Party offered by ECS. ECS offers parties in various bars/clubs in Seville, that can either be for free for ECS card holders or at cost.

Product: ECS offers different products, such as trips, events and parties. The products can be purchased on the ECS website, or at the office.

Registration: Process, in which the user becomes a member of the Erasmus Club Seville.

Trip: Trip offered by ECS. ECS offers trips to various places across Spain, Portugal and Morocco that can range from one-day trips to trips that are multiple days long.

3 | Description of the current situation

3.1 Pros and Cons of the current situation

3.1.1 Positive aspects of the current situation

| | |
|-------------|--|
| PRO-0001 | Trips on Website |
| Version | 1.0 |
| Description | There is a collection of trips on the website, containing a short description and the dates of the trip. They can be booked online directly on the website. |

| | |
|-------------|--|
| PRO-0002 | Use of Social Networks |
| Version | 1.0 |
| Description | Erasmus Club Sevilla already tries to comply to the needs of Erasmus students nowadays by being present on different platforms. They have accounts and post information on Instagram, Facebook, Whatsapp and their Website. |

| | |
|-------------|---|
| PRO-0003 | Good reputation among students |
| Version | 1.0 |
| Description | <p>Erasmus Club Sevilla is very well known among erasmus students.</p> <p>They especially profit from recommendations and oral communication among erasmus students</p> |

3.1.2 Negative aspects of the current situation

| | |
|-------------|---|
| CON-0001 | Physical ECS Card |
| Version | 1.0 |
| Description | <p>The Erasmus Card right now only exists as a physical card that students can only get by going to the Erasmus Club Sevilla Office. The card can easily be lost, in that case, students have to buy a new one.</p> |

| | |
|-------------|--|
| CON-0002 | Excessively distributed information |
| Version | 1.0 |
| Description | <p>Not all information is published on the website. Some is published via What's App, Facebook or Instagram. This leads to misinformation of students about trips and causes confusion amongst students.</p> |

| | |
|-------------|---|
| CON-0003 | Limited opening hours |
| Version | 1.0 |
| Description | <p>The office is only open for a couple of hours during the day giving students only a small timeframe for questions or issues, especially since the hours are during university hours.</p> |

3. DESCRIPTION OF THE CURRENT SITUATION **10**

| | |
|-------------|---|
| CON-0004 | Not mobile phone friendly |
| Version | 1.0 |
| Description | The website is only partly optimized for the use on phones. The text on large pictures can for example not be read and some links are only clickable when using a PC. Since nowadays, a mobile phone is the most used medium for students to retrieve information, there should be a solution taking this into account. |

| | |
|-------------|--|
| CON-0005 | Missing information on some Social Networks |
| Version | 1.0 |
| Description | Some Information can only be retrieved on special platforms for example Facebook or Instagram. Some students do not have these services. This should not be the reason for students to sign up to a social media account in order to not miss out on necessary information. |

| | |
|-------------|--|
| CON-0006 | Fee for online payment |
| Version | 1.0 |
| Actors | Office Worker, Accountant |
| Description | When paying online, students have to pay a fee of an additional 2-6% of their purchase, due to an existing credit card fee. To avoid this fee, students would have to go to the office in person and pay in cash. |

3.2 Model of the current business processes

3.2.1 Description of the current actors

| | |
|-------------|---|
| ANA-0001 | Manager |
| Version | 1.0 |
| Description | The Manager, or also boss of the company, is responsible for all the employees and the leadership of the company. The role involves hiring new staff and ensuring that all employees comply with the company policies and procedures. |

| | |
|-------------|---|
| ANA-0002 | Office Worker |
| Version | 1.0 |
| Description | The Office Worker is available during office hours in the ECS office and is the direct contact for customers. |

| | |
|-------------|--|
| ANA-0003 | Organizer |
| Version | 1.0 |
| Description | The Organizer's task is to plan trips and parties and reach out to other companies to make deals for cooperations. They also prepare the information mail and send it to students that booked the respective trip. |

| | |
|-------------|--|
| ANA-0004 | Social Media Responsible |
| Version | 1.0 |
| Description | This role includes all representative work of ECS on Social Media Channels like Facebook, Instagram and What's App. They are furthermore sending out information about upcoming events and keep their customers informed about offers. |

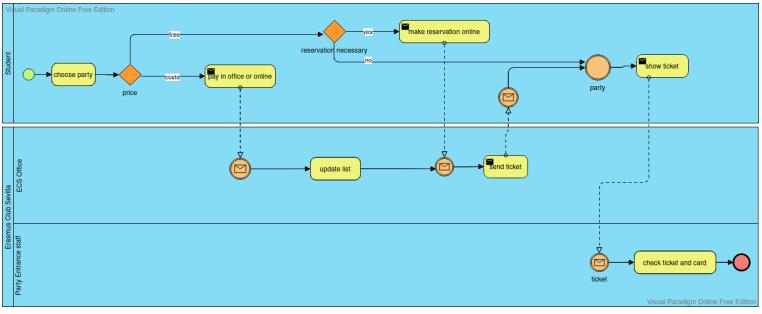
| | |
|-------------|---|
| ANA-0005 | Application Responsible |
| Version | 1.0 |
| Description | The person being responsible for the new ECS application will update news on the application, collect improvement ideas and analyse errors that should be solved for the next version of the application. Another task is to stay in contact with the programmers of the application. |

| | |
|-------------|---|
| ANA-0006 | Accountant |
| Version | 1.0 |
| Description | The Accountant keeps an eye on the financial situation of the company. Moreover they are responsible for further processing of incoming payments of Erasmus students. |

3.2.2 Description of the current processes

| | |
|-------------|---|
| PNA-0001 | Sign Up + ECS Card |
| Version | 1.0 |
| Description | <p>In order to receive discounts for various trips and to be able to enter some restricted parties, students have to sign up and buy the ECS-Card. In order to do so, they first have to fill out the form online. The payment and collection of the card is then directly done in the office during office hours. The student also receives a welcome pack containing goodies.</p> |

| | |
|-------------|--|
| PNA-0002 | Buy Trip Ticket |
| Version | 1.0 |
| Description | <p>To buy a ticket for a trip, students must do an online reservation. Then they can decide to either pay in cash at the office or via common online paying methods. Depending on the payment, an additional fee is applied. After the payment, the student will receive a confirmation email. More information about the trip is sent out by ECS approximately 2 days in advance.</p> <pre> graph TD subgraph Student [Student] S1[sign up for trip] --> S2[choose payment option] S2 --> D{payment option} D -- in cash --> S3[pay in office] D -- online --> S4[pay online] S3 --> S5[make payment] S4 --> S5 S5 --> S6[confirmation mail] end subgraph ErasmusDatabase [Erasmus Database] E1[publish offer] E1 --> E2[wait to receive money] E2 --> E3[send confirmation mail] E2 --> E4[send details] E3 -- "two days before trip" --> E4 end </pre> |
| Comments | Payment by Paypal costs an additional 6% per ticket. Paying with credit card requires a 2% fee. Only paying in cash is without any additional fee. |

| | |
|-------------|---|
| PNA-0003 | ECS Parties |
| Version | 1.0 |
| Description | <p>There are different kinds of tickets for ECS parties. Some tickets are free, others are not. For the ones that have a price, students can buy them online or in the office. For some of the free tickets, a reservation is still necessary. This can be done online by the student. After the payment or reservation, the student receives a confirmation email. At the party they have to show their ticket and their Erasmus card at the entrance.</p>  <pre> graph TD Start(()) --> ChooseParty[choose party] ChooseParty --> PriceDecision{price} PriceDecision -- free --> ShowTicket[show ticket] PriceDecision -- cost --> BuyOrReserve{buy in office or online} BuyOrReserve --> MakeReservation{make reservation online} MakeReservation --> ConfirmationEmail(()) ConfirmationEmail --> ShowTicket ShowTicket --> Party((party)) Party --> CheckIn[check ticket and card] CheckIn --> End((())) subgraph "ECS Office" UpdateList[update list] SendTicket[send ticket] UpdateList --> SendTicket end subgraph "Erasmus Card Holder" Party ConfirmationEmail SendTicket end </pre> |

| | |
|-------------|--|
| PNA-0004 | Sell Ticket |
| Version | 1.0 |
| Description | <p>If students bought a ticket, but are unable to attend the event, there is a possibility to sell the ticket. Once they have found a buyer and sold the ticket, they have to write an email to "info@erasmusclubsevilla.com" with the name and contact details of the new owner of the ticket. The student who bought the ticket, then must pay an additional 5€ to ECS on the day of the event.</p> <pre> graph TD subgraph "Student (buyer)" start1(()) --> sendEmailBuyer[send email] sendEmailBuyer --> receiveEmailSeller[receive email] receiveEmailSeller --> end1((())) pay5euro[pay 5 euro] pay5euro --> end1 pay5euro -.-> dayEvent[day of the event] dayEvent -.-> receiveEmailSeller end subgraph "Student (seller)" start2(()) --> sendEmailSeller[send email to ECS] sendEmailSeller --> receiveEmailECS[receive email] receiveEmailECS --> end2((())) end subgraph "Erasmus Club Sevilla" start3(()) --> updateList[update student list & send confirmation email] updateList --> end3((())) end </pre> |

3.3 Current technological environment

3.3.1 Description of the current hardware

The servers for the website and program are provided by the company "zerotec" and are located and managed externally.

3.3.2 Description of the current software

An external company named "zerotec" was hired to develop the website and the back-end program based on the needs of the company. The backend program can be used for all business needs. For some minor tasks, that cannot be solved with the ECS program, employees use Excel and Google Analytics.

4 | Business Needs

4.1 Objectives of the system

| | |
|-------------|---|
| US-0001 | List of my events |
| Version | 1.0 |
| Description | <p>As a customer</p> <p>I want to see what events I have already booked or bought</p> <p>so that I know when I have free time and can manage my time better.</p> |
| Comments | List of events should include the status of the event (booked/bought) with the according dates, price, and information about how many slots are left. Bought events should include tickets. |

| | |
|-------------|---|
| US-0002 | Digital ECS Card |
| Version | 1.0 |
| Description | <p>As a customer</p> <p>I want to to have access to my ECS card digitally</p> <p>so that I don't have to worry about taking the physical card with me.</p> |
| Comments | The digital ECS card shall store all the necessary information as the physical one. |

| | |
|-------------|---|
| US-0003 | Direct payment |
| Version | 1.0 |
| Description | <p>As a customer</p> <p>I want to directly pay inside the application without additional fees</p> <p>so that the payment process is faster and is not relying on other applications.</p> |
| Comments | No comments |

| | |
|-------------|---|
| US-0004 | History of my events |
| Version | 1.0 |
| Description | <p>As a customer</p> <p>I want to have access to an overview of all my previous events</p> <p>so that I do not forget where I have already been.</p> |
| Comments | No comments |

| | |
|-------------|--|
| US-0005 | Reminder |
| Version | 1.0 |
| Description | <p>As a customer</p> <p>I want to be reminded of upcoming events</p> <p>so that I do not forget my booked events.</p> |
| Comments | The reminder of the upcoming event shall include all necessary information, such as the meeting point, the date and the time. |

| | |
|-------------|--|
| US-0006 | Cancellation process |
| Version | 1.0 |
| Description | <p>As a customer I want to cancel my booking so that other people can buy the ticket for this event and I can get a refund.</p> |
| Comments | Cancellation should take place at least 72 hours before the event. After that there is no possibility to cancel a reservation. |

| | |
|-------------|---|
| US-0007 | Selling process |
| Version | 1.0 |
| Description | <p>As a customer I want to sell my ticket so that other people can buy it.</p> |
| Comments | 72 hours before the trip the possibility of cancellation is closed, but students are still provided the possibility to sell their ticket. |

| | |
|-------------|--|
| US-0008 | Chatroom with ECS members |
| Version | 1.0 |
| Description | <p>As a customer I want to chat with other ECS members so that I can communicate about uncertainties related to ECS activities.</p> |
| Comments | No comments |

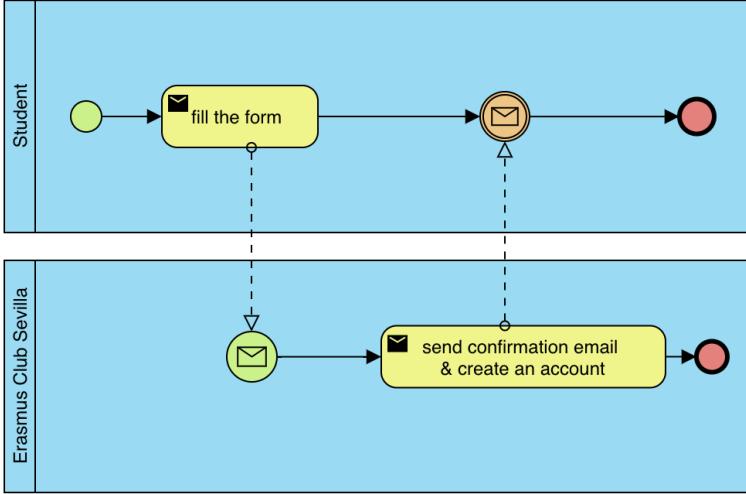
| | |
|-------------|---|
| US-0009 | Chatroom with ECS staff |
| Version | 1.0 |
| Description | As a customer I want to chat with ECS staff so that I can quickly ask my question realated to ECS ac-tivities. |
| Comments | No comments |

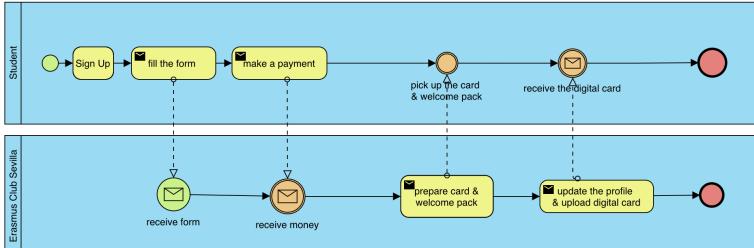
4.2 Description of the processes that will be implemented

4.2.1 Description of the actors that will be implemented

For the implementation of the project, no new actors have to be created. Most of the actors described in chapter 3.2.1 will remain the same, changes are only necessary for the actor ACT-0001 "Organizer" and for actor ACT-0002 "Social Network Responsible". In the future, Organizers are also responsible for posting all the necessary information about the event on the website. Social Network Responsibles will be additionally assigned to answer user questions in the newly created chatrooms.

4.2.2 Description of the processes that will be implemented

| | |
|-------------|--|
| DES-0001 | Sign Up |
| Version | 1.0 |
| Description | <p>In order to be able to join a trip, students have to create an ECS account. To do so, they have to fill out an online form. Afterwards, they receive an email with a confirmation of the successful registration.</p>  <pre> graph LR subgraph "Student" S(()) --> F1["fill the form"] F1 --> M1(()) M1 --> E1((())) end subgraph "Erasmus Club Sevilla" M2(()) --> F2["send confirmation email & create an account"] F2 --> E2((())) end E1 --- M2 </pre> |
| Comments | No comment |

| | |
|-------------|---|
| DES-0002 | Buy an ECS Card |
| Version | 1.0 |
| Description | <p>In order to get discounts for various trips and to enter some restricted parties, students have to buy the ECS card. To do so, they have to have an ECS account. The payment of the card can be done by using direct payment inside the application or in the office during office hours. The digital card is available automatically in the application as soon as the payment is credited. In order to collect the physical card and the welcome pack, students should go to the office during office hours.</p>  <pre> graph LR subgraph Student [Student] S1((Sign Up)) --> S2[fill the form] S2 --> S3[make a payment] S3 --> S4((pick up the card & welcome pack)) S4 --> S5((receive the digital card)) end subgraph ECSevilla [Erasmus Club Sevilla] E1((receive form)) --> E2((receive money)) E2 --> E3[prepare card & welcome pack] E3 --> E4[update the profile & upload digital card] end S1 -.-> E1 S2 -.-> E2 S3 -.-> E3 S4 -.-> E4 S5 -.-> E4 </pre> |
| Comments | No comment |

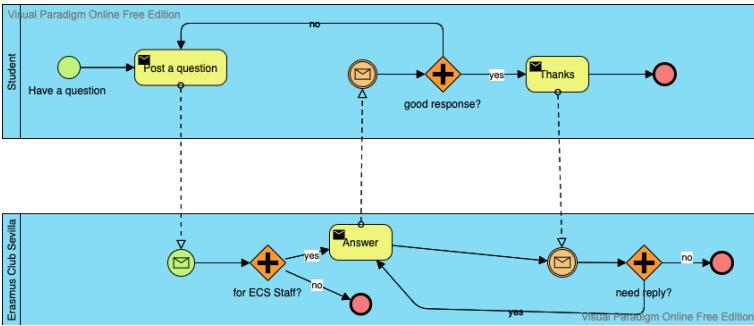
| | |
|-------------|---|
| DES-0003 | Buy Trip Ticket |
| Version | 1.0 |
| Description | <p>To buy a ticket for a trip, students need to register online. Then they can decide to either pay in cash at the office or online. Depending on the payment method, an additional fee is applied. The system automatically shows the price depending on the type of their membership. For members with the ECS Card, the price includes a discount. After the payment, the student will receive a confirmation email. A mail with information about the trip is sent out by ECS approximately 2 days in advance. In addition, the needed information is uploaded in the application in the "list of my events" section.</p> <pre> graph LR subgraph Student [Student] S1[sign up for trip] --> S2[choose payment option] S2 --> S3[pay for a trip] S3 --> S4[receive money] S4 --> S5[send confirmation mail] S5 --> S6[to the trip] S2 --> S7[send mail with details] S7 --> S6 S5 -.-> S2 S7 -.-> S2 end subgraph ECSV [Erasmus Club Sevilla] E1[publish the Offer for the trip] --> E2[choose payment option] E2 --> E3[receive money] E3 --> E4[send confirmation mail] E4 --> E5[send mail with details] E5 --> E6[to the trip] end </pre> |
| Comments | <p>Payments by Paypal cost an additional 6% per ticket. Paying with credit card requires a 2% fee. Only paying in cash is without any additional fee. Needed information about the trip include: date of the trip, meeting point and meeting hour, short description about the trip with the schedule and hour of arrival.</p> |

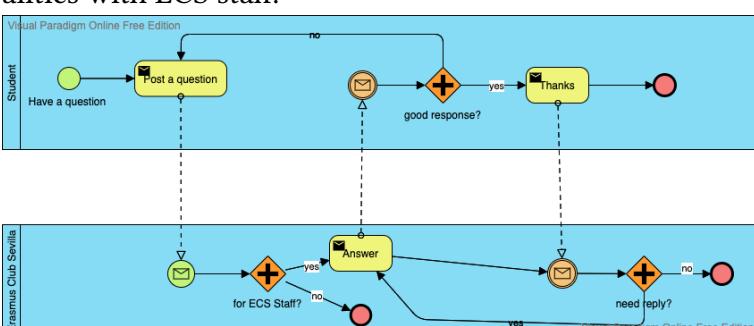
| | |
|-------------|---|
| DES-0004 | ECS Parties |
| Version | 1.0 |
| Description | <p>There are different kinds of tickets for ECS parties. Some tickets are free, some are not. For the ones that have a price, students can buy them online or in the office. For some of the free tickets a reservation is still necessary. To book or buy a ticket for a party, students need to register online. Then they can decide to either pay in cash at the office or online. Depending on the kind of payment, an additional fee is applied. The system automatically shows the price depending on the type of membership. For members with the ECS Card, the price includes a discount. After the payment or reservation, the student receives a confirmation email and the specific party shows up in the application in the "list of my events" section. The ticket shows, whether the ticket is purchased with or without a discount for card-holders. At the party students have to show their digital ticket and ECS-Card at the entrance.</p> <pre> graph TD subgraph Student [Student] S1(()) -- choose party --> D1{ } D1 -- free --> R1[make an online reservation] D1 -- cost --> R2[pay in the office or online] R1 --> M1(()) R2 --> M2(()) M1 --> E1[show ticket] M2 --> E1 E1 --> EN1((())) end subgraph ECSOffice [ECS Office] PES[Party Enormous Staff] D2{ } D2 -- reservation necessary --> R3[make an online reservation] R3 --> M3(()) M3 --> S2[send a confirmation mail with ticket & update 'list of my events'] S2 --> T1[ticket] T1 --> M4(()) M4 --> EN2((())) end EN1 --> D2 EN2 --> D2 </pre> <p>The diagram illustrates the business process for ticket booking and management. It is divided into two main participants: 'Student' and 'ECS Office'. The 'Student' participant starts by choosing a party. A decision diamond determines if the party is 'free' or 'cost'. If free, the student makes an online reservation. If there is a cost, the student can either pay in the office or online. Both paths lead to a confirmation step (M1 or M2). The student then shows their ticket at the entrance (EN1). The 'ECS Office' participant manages the party. They receive a confirmation from the student and send a confirmation mail with the ticket and update the 'list of my events'. This leads to a ticket being issued (T1), which is then shown at the entrance (EN2).</p> |
| Comments | No comment |

| | |
|-------------|---|
| DES-0005 | Reminder Process |
| Version | 1.0 |
| Description | <p>After purchasing or booking an event, students receive notifications about the product. Notifications include: confirmation of the reservation, information about each change in the description, information about each update of necessary information, a reminder 2 days in advance of the upcoming event and information about the number of available spots.</p> <pre> graph LR subgraph Student [Student] S_start(()) --> S_book[book the event] S_book --> S_rec1{receive notification} S_rec1 --> S_update1[update details about the event] S_update1 --> S_rec2{receive notification} S_rec2 --> S_update2[update details about the event] S_update2 --> S_rec3{receive notification} S_rec3 --> S_end((())) end subgraph Erasmus_Club_Sevilla [Erasmus Club Sevilla] E_send[send confirmation] --> E_update[update details about the event] E_update --> E_reminder{reminder about the event 2 days before event} E_reminder --> E_end((())) end S_rec1 -.-> E_send S_rec1 -.-> E_update S_rec2 -.-> E_update S_rec3 -.-> E_reminder </pre> |
| Comments | No comment |

| | |
|-------------|---|
| DES-0006 | Cancellation Process |
| Version | 1.0 |
| Description | <p>After purchasing or booking an event, students can cancel their order up to 72 hours before the event starts. To do this, they must fill out the appropriate form. Then they will receive a confirmation of the cancellation and a refund if the order had been paid. The event will disappear from the "list of my events" list. The number of available spots for that event will be updated automatically.</p> <pre> graph LR subgraph Student [Student] S_start(()) --> S_decision{wants cancel date verification} S_decision -- less than 72h to event --> S_end((())) S_decision -- more than 72h to event --> S_form[fill the cancellation form] S_form --> S_rec1{receive notification} S_rec1 --> S_update1[update information in application] S_update1 --> S_rec2{receive notification} S_rec2 --> S_update2[update information in application] S_update2 --> S_rec3{receive notification} S_rec3 --> S_end((())) end subgraph Erasmus_Club_Sevilla [Erasmus Club Sevilla] E_send[send confirmation mail & refund money] --> E_update[update information in application] E_update --> E_end((())) end S_rec1 -.-> E_send S_rec1 -.-> E_update S_rec2 -.-> E_update S_rec3 -.-> E_update </pre> |
| Comments | No comment |

| | |
|-------------|---|
| DES-0007 | Selling Process |
| Version | 1.0 |
| Description | <p>If students bought a ticket but are unable to attend the event, there is a possibility to sell the ticket. Once they have found a buyer, they can choose the appropriate option and sell the ticket to another person. To perform the sale, they need to provide the buyers email in the appropriate form. The buyer will automatically receive a notification that the ticket can be redeemed. The payment can be made both in the office and online. After paying the amount of the ticket price and additional 5 Euro, the buyer will be registered for this event and the person selling the ticket will be crossed off the list of participants. The seller will also get a refund. All the necessary information will automatically appear in the new buyer's account and they will disappear from the seller's account.</p> <pre> graph TD subgraph Seller [Seller] A(()) -- "find a buyer" --> B["fill the selling form"] B --> C(()) C --> D(()) D -- "refund of money & deleted event" --> E((())) end subgraph Buyer [Buyer] F(()) --> G["confirm willingness of buying this ticket"] G --> H["pay ticket price +5 EURO"] H --> I(()) I -- "added event" --> J((())) end subgraph ECSOffice [ECS Office] K(()) --> L["upload changes in the application"] L --> M((())) M -- "receive the money & selling form" --> N(()) end C -.-> G D -.-> I J -.-> N </pre> |
| Comments | No comment |

| | |
|-------------|---|
| DES-0008 | History |
| Version | 1.0 |
| Description | <p>Each participant has access to the list of events, in which he participated. The list is sorted chronologically. In addition to the information available before the event, the student has the option of adding a note and seeing people who took part in the same event.</p>  <pre> sequenceDiagram actor Student actor "Erasmus Club Sevilla" Note over Student: Have a question Note over "Erasmus Club Sevilla": Student->>Post a question: Note over Post a question: Post a question-->>Erasmus Club Sevilla: Note over Erasmus Club Sevilla: Erasmus Club Sevilla-->>Answer: Note over Answer: Answer-->>Student: Note over Student: good response? Student-->>Thanks: Note over Thanks: Thanks-->>Student: Note over Student: Student-->>Erasmus Club Sevilla: Note over Erasmus Club Sevilla: Erasmus Club Sevilla-->>Answer: Note over Answer: Answer-->>Erasmus Club Sevilla: Note over Erasmus Club Sevilla: for ECS Staff? Erasmus Club Sevilla-->>Student: Note over Student: Student-->>Erasmus Club Sevilla: Note over Erasmus Club Sevilla: Erasmus Club Sevilla-->>Answer: Note over Answer: Answer-->>Erasmus Club Sevilla: Note over Erasmus Club Sevilla: need reply? Erasmus Club Sevilla-->>Student: Note over Student: </pre> |
| Comments | No comment |

| | |
|-------------|---|
| DES-0009 | Chatrooms |
| Version | 1.0 |
| Description | <p>Each ECS member has the opportunity to contact other ECS participants via a group chat. The chat also has a search function. Each member has access to the conversation history. There is also a chat with identical functionalities with ECS staff.</p>  <pre> sequenceDiagram actor Student actor "Erasmus Club Sevilla" Note over Student: Have a question Note over "Erasmus Club Sevilla": Student->>Post a question: Note over Post a question: Post a question-->>Erasmus Club Sevilla: Note over Erasmus Club Sevilla: Erasmus Club Sevilla-->>Answer: Note over Answer: Answer-->>Student: Note over Student: good response? Student-->>Thanks: Note over Thanks: Thanks-->>Student: Note over Student: Student-->>Erasmus Club Sevilla: Note over Erasmus Club Sevilla: Erasmus Club Sevilla-->>Answer: Note over Answer: Answer-->>Erasmus Club Sevilla: Note over Erasmus Club Sevilla: for ECS Staff? Erasmus Club Sevilla-->>Student: Note over Student: Student-->>Erasmus Club Sevilla: Note over Erasmus Club Sevilla: Erasmus Club Sevilla-->>Answer: Note over Answer: Answer-->>Erasmus Club Sevilla: Note over Erasmus Club Sevilla: need reply? Erasmus Club Sevilla-->>Student: Note over Student: </pre> |
| Comments | No comment |

5 | Description of the subsystems to be developed

ECS does not have any subsystems.

6 | Requirements Catalogue for the system to be developed

6.1 General requirements of the system

| | |
|-------------|--|
| GR-0001 | Sign Up and Request Card |
| Version | 1.0 |
| Actors | Office Worker |
| Description | Students want to be able to sign up and request a card in order to be a member of ECS. Signing up includes requesting an username and a password. With the created account, the user should be able to request an ECS card and pick it up at the office. |

| | |
|-------------|---|
| GR-0002 | Place Order |
| Version | 1.0 |
| Actors | Social Media Responsible, Organizer |
| Description | Students want to be able to join trips and parties. Events should be visible in the application. Students can join them and pay directly. |

| | |
|-------------|---|
| GR-0003 | Manage Products |
| Version | 1.0 |
| Actors | Organizer |
| Description | Students want to see an overview of their bought products. Furthermore, they should be able to view trip related information and cancel them. The Organizer wants to be able to see an overview of the event and the participating students. He can also add information to events. |

6.2 Use cases of the system

6.2.1 Use-Case Diagrams

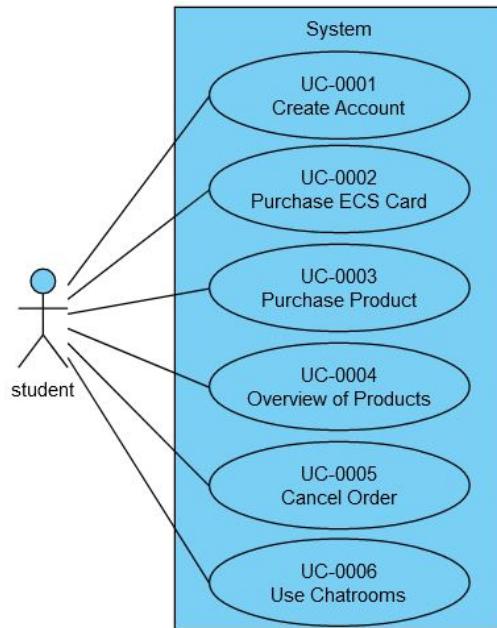


Figure 5: Use Case Diagram Student

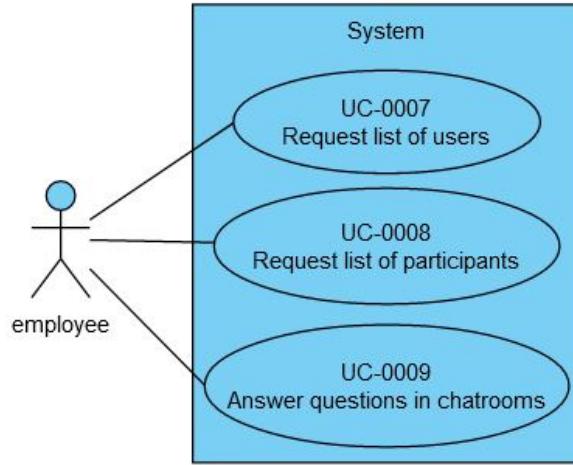


Figure 6: Use Case Diagram Employee

6.2.2 Actor Classification

In order to specify actors for use cases in the Erasmus Club Sevilla Project, only two kind of actors have to be specified: employees, which are employed by Erasmus Club Sevilla, and students, which are the customers of the Erasmus Club Sevilla.

6.2.3 Use Case Specification

| | |
|-------------------|---|
| UC-0001 | Create Account |
| Version | 1.0 (17.11.2021) |
| Author | IR-ENG-ADT-05 |
| Dependencies | no dependencies |
| Description | Students want to create an account with Erasmus Club Sevilla in order to be able to participate in trips and parties and to receive discounts at certain partners. |
| Precondition | The student needs to download the app of Erasmus Club Sevilla. |
| Ordinary sequence | <ol style="list-style-type: none"> 1.The student needs to navigate to the login and can there choose the possibility to sign up for the club. 2. The student needs to enter personal data like name, surname, e-mail address, etc. to create the account. 3. After the account has been created, a confirmation mail will be sent out. |
| Postcondition | The creation of the account is necessary to purchase a ECS Card or to participate in a trip/party. |
| Comments | no comments |

| | |
|-------------------|---|
| UC-0002 | Purchase ECS Card |
| Version | 1.0 (18.11.2021) |
| Author | IR-ENG-ADT-05 |
| Dependencies | no dependencies |
| Description | Purchase of the ECS-Card to profit from discounts and free entrance to parties. |
| Precondition | The student needs to have an account with Erasmus Club Sevilla and needs to login with e-mail and password. |
| Ordinary sequence | <ol style="list-style-type: none"> 1. Once logged in, the student needs to navigate to the account settings and click the button to purchase the card. 2. The student needs to select a payment method. 3. The student needs to add a picture to the card. 4. The student receives an e-mail confirming the purchase of the card. 5. After the purchase, the ECS card is digitally available in the app. |
| Postcondition | After the purchase of the ECS card, the student can profit from discounts and free entrance to parties. |
| Comments | no comments |

| | |
|-------------------|--|
| UC-0003 | Purchase Product |
| Version | 1.0 (19.11.2021) |
| Author | IR-ENG-ADT-05 |
| Dependencies | no dependencies |
| Description | The purchase of products is necessary to take part in trips and/or parties. For products with a limitation of participants, only the purchase of the product guarantees the participation. |
| Precondition | In order to purchase a product, a student has to have signed up with Erasmus Club Sevilla. Depending on the kind of product, it might also be necessary that the student owns the ECS Card (for special parties). In addition, the student needs to log in. |
| Ordinary sequence | <ol style="list-style-type: none"> 1. The student chooses the product he wants to purchase from the list. 2. The student adds the trip to the chart. 3. Once finished with the selection of the products, the student can checkout. 4. During the checkout, the student can choose the preferred payment method and save the data for the next purchase. |
| Postcondition | The student receives a confirmation mail and the purchased products appear in his list of purchased products. |
| Comments | no comments |

| | |
|-------------------|---|
| UC-0004 | Overview of products |
| Version | 1.0 (19.11.2021) |
| Author | IR-ENG-ADT-05 |
| Dependencies | no dependencies |
| Description | After products have been purchased, the student can navigate to a list providing an overview of all upcoming and already past trips. |
| Precondition | The student has an account with Erasmus Club Sevilla and is logged in. |
| Ordinary sequence | <ol style="list-style-type: none"> 1. The student navigates to the overview of the products within the account section. 2. The student chooses to either see the upcoming trips or the trips which have happened in the past. |
| Postcondition | In the overview of products the upcoming and past purchased trips can be seen. |
| Comments | no comments |

| | |
|-------------------|---|
| UC-0005 | Cancel Order |
| Version | 1.0 (20.11.2021) |
| Author | IR-ENG-ADT-05 |
| Dependencies | no dependencies |
| Description | Once a product has been purchased, a student can also cancel the trip or party. |
| Precondition | A product has been purchased and the student is logged in. |
| Ordinary sequence | <ol style="list-style-type: none"> 1. The student navigates to the overview of products within the account section. 2. The student chooses the product that needs to be cancelled and cancels it. |
| Postcondition | A confirmation mail will be sent out and depending on the conditions of the product, the student will receive a reimbursement. In addition, the product will be deleted from the list of upcoming events. |
| Comments | no comments |

| | |
|-------------------|---|
| UC-0006 | Use Chatrooms |
| Version | 1.0 (20.11.2021) |
| Author | IR-ENG-ADT-05 |
| Dependencies | no dependencies |
| Description | The students can use chatrooms if they require more information about a product, resell a product to another student or have any other questions. |
| Precondition | The student has purchased a product and is logged in. |
| Ordinary sequence | <p>1. The student needs to navigate to the chatrooms by clicking on the letter-icon.</p> <p>2. Here they can see an overview of all chatrooms that they are a member of - there exists one chatroom for each product.</p> |
| Postcondition | The student is able to use the chatrooms by asking questions and receiving answers. |
| Comments | no comments |

| | |
|-------------------|---|
| UC-0007 | Request list of users |
| Version | 1.0 (20.11.2021) |
| Author | IR-ENG-ADT-05 |
| Dependencies | no dependencies |
| Description | Employees can get an overview of all users that have signed up for ECS. |
| Precondition | The employee has a employee sign-up and is logged in. |
| Ordinary sequence | The employee chooses the option to display the users and sees a list of all users in the system (all users of the current semester). There is also a possibility to select certain filters. |
| Postcondition | The selected users are shown. |
| Comments | no comments |

| | |
|-------------------|---|
| UC-0008 | Request list of participants |
| Version | 1.0 (20.11.2021) |
| Author | IR-ENG-ADT-05 |
| Dependencies | no dependencies |
| Description | When guiding a trip, employees can see a list of all participants in the app in order to e.g. check the attendance. |
| Precondition | The employee has a employee sign-up and is logged in. |
| Ordinary sequence | The employee navigates to the list of events and chooses the corresponding event. |
| Postcondition | The employee is provided with a list of all participants including the phone number and a box behind it to tack the person. |
| Comments | no comments |

| | |
|-------------------|---|
| UC-0009 | Answer questions in chatrooms |
| Version | 1.0 (20.11.2021) |
| Author | IR-ENG-ADT-05 |
| Dependencies | no dependencies |
| Description | Employees need to answer questions of students in the provided chatrooms. |
| Precondition | The employee needs to log in. |
| Ordinary sequence | Employees navigate to the chatrooms, choose the corresponding product and can then get in contact with students and answer their questions. |
| Postcondition | Answers to questions in the chatrooms can be given. |
| Comments | no comments |

6.3 Functional requirements

6.3.1 Information Requirements

| | |
|---------------|---|
| IRQ-0001 | User |
| Version | 1.0 |
| Description | The system shall store information about the User. In detail: |
| Specific data | <ul style="list-style-type: none">• Username• Password• First name• Last name• Date of birth• E-Mail |
| Comments | No comments |

| | |
|---------------|---|
| IRQ-0002 | Order |
| Version | 1.0 |
| Description | The system shall store information about the Order. In detail: |
| Specific data | <ul style="list-style-type: none"> • Date • Order Status • Products • Amount • Payment • Payment Method • Order Line <p>The system should store additional information about the Payment:</p> <ul style="list-style-type: none"> • Amount • Date <p>The system should store the Order Line with following information:</p> <ul style="list-style-type: none"> • Quantity • Price <p>If the payment method is a Credit card the system shall additionally store:</p> <ul style="list-style-type: none"> • Credit Card Number • Security Number • Validity • Validity • Owner • Name of the Issuer <p>If the payment method is PayPal the system shall additionally store:</p> <ul style="list-style-type: none"> • E-Mail address <p>The payment method can also be cash.</p> |
| Comments | No comments |

| | |
|---------------|---|
| IRQ-0003 | Product |
| Version | 1.0 |
| Description | The system shall store information about the Product. In detail: |
| Specific data | <ul style="list-style-type: none"> • Max amount of participants • Product Type • Description • Price • Product Status • Date <p>If the product is a Trip the system should store additionally:</p> <ul style="list-style-type: none"> • Destination • Meeting point • Meeting time • Start date • Return date <p>If the product is a Party the system should store additionally:</p> <ul style="list-style-type: none"> • Location • Time of entry |
| Comments | No comments |

| | |
|---------------|--|
| IRQ-0004 | Payment |
| Version | 1.0 |
| Description | The system shall store information about the payment. In detail: |
| Specific data | <ul style="list-style-type: none"> • Amount • Date |
| Comments | No comments |

| | |
|---------------|--|
| IRQ-0005 | Employee |
| Version | 1.0 |
| Description | The system shall store information about the employee. In detail: |
| Specific data | <ul style="list-style-type: none"> • First name • Last name • ID number • E-Mail |
| Comments | No comments |

6.3.2 Business Rules of the system

| | |
|-------------|---|
| CRQ-0001 | Only one Erasmus Card per user |
| Version | 1.0 |
| Description | <p>The system must fulfill the following rule regarding the User:</p> <p>A User can only possess one Erasmus Club Card.</p> |
| Comments | No comments |

| | |
|-------------|---|
| CRQ-0002 | Booking of trips only possible for the user himself |
| Version | No comments |
| Description | <p>The system must fulfill the following rule regarding the booking of Trips:</p> <p>A User can only book a single ticket for himself for a trip.</p> |
| Comments | No comments |

| | |
|-------------|---|
| CRQ-0003 | Booking only possible if max amount of participants is not reached |
| Version | No comments |
| Description | The system must fulfill the following rule regarding the booking of Trips & Parties : A User can only book a ticket for a trip or party , if the max amount of participants is not reached. |
| Comments | No comments |

6.3.3 System behavior requirements

At this point we have not found any system behavior requirements.

6.4 Non-functional requirements

6.4.1 Maintainability requirements

| | |
|-------------|--|
| NFR-0001 | Data integrity |
| Version | 1.0 |
| Description | The system shall maintain data integrity by keeping backups of all updates to the database for every recorded transaction. |
| Comments | No comments. |

6.4.2 Portability requirements

| | |
|-------------|---|
| NFR-0002 | Simultaneous action |
| Version | 1.0 |
| Description | When editing some descriptions or uploading new things to the app, the rest of the services stays up and running. |
| Comments | No comments. |

6.4.3 Safety requirements

| | |
|-------------|--|
| NFR-0003 | Data protection |
| Version | 1.0 |
| Description | Only admins can view the users private data. |
| Comments | No comments. |

| | |
|-------------|---|
| NFR-0004 | Authentication |
| Version | 1.0 |
| Description | The system should support multiple login sessions concurrently, and sessions shall be protected in relation to each other |
| Comments | To avoid session hijacking. |

6.4.4 Other non-functional requirements

| | |
|-------------|---|
| NFR-0005 | Data Format |
| Version | 1.0 |
| Description | The date format must be as follows: day.month.year. |
| Comments | no comments |

| | |
|-------------|--------------------------------------|
| NFR-0006 | Currency |
| Version | 1.0 |
| Description | Payments have to be provided in EURO |
| Comments | no comments |

| | |
|-------------|--|
| TRQ-0001 | Operating System |
| Version | 1.0 |
| Description | The first implementation of the application should be available on Android and iOS. Later on it can be extended to more operating systems. |

6.5 Integration requirements of the system

| | |
|-------------|--|
| IRQ-0001 | Backend Program |
| Version | 1.0 |
| Description | At the moment there is a backend program that manages the backend of the website. This should continue to exist and also be connected to the application so that application and website can be managed with one tool. |

| | |
|-------------|---|
| IRQ-0002 | PayPal |
| Version | 1.0 |
| Description | Since Erasmus Club wants to offer payment over PayPal, the application needs to be connected to PayPal at the checkout. |

6.6 Information about the traceability of the system

| General Requirements | | GR-0001 Sign -Up and Request Card | GR-0002 Place Order | GR-0003 Manage Product |
|-----------------------|---|--|------------------------|------------------------------|
| detailed requirements | UC-0001 Create Account | x | | |
| | UC-0002 Purchas ECS-Card | x | | |
| | UC-0003 Purchase Product | | x | |
| | UC-0004 Overview of products | | | x |
| | UC-0005 Cancel Order | | | x |
| | UC-0006 Use Chatrooms | | | x |
| | UC-0007 Request list of users | | | x |
| | UC-0008 Request list of participants | | | x |
| | UC-0009 Abswer questions in chatrooms | | | x |

Figure 7: Traceability Matrix: General Requirements - Use Cases

| General Requirements | | GR-0001 Sign -Up and Request Card | GR-0002 Place Order | GR-0003 Manage Product |
|-----------------------|----------------------|--|------------------------|------------------------------|
| detailed requirements | IRQ-0001 User | x | | |
| | IRQ-0002 Order | | x | |
| | IRQ-0003 Product | | x | x |
| | IRQ-0004 Payment | | x | |
| | IRQ-0005 Employee | | | x |

Figure 8: Traceability Matrix: General Requirements - Functional Requirements

| General Requirements | | | | |
|-----------------------|---|--|------------------------|------------------------------|
| | | GR-0001 Sign -Up and Request Card | GR-0002 Place Order | GR-0003 Manage Product |
| detailed requirements | CRQ-0001 only one card per user | x | | |
| | CRQ-0002 Booking only for user himself | | x | |
| | CRQ-0003 booking only if limit not reached | | x | |

Figure 9: Traceability Matrix: General Requirements - Business Rules

| General Requirements | | | | |
|-----------------------|---------------------------------|--|------------------------|------------------------------|
| | | GR-0001 Sign -Up and Request Card | GR-0002 Place Order | GR-0003 Manage Product |
| detailed requirements | NRF-0001 Data integrity | x | x | x |
| | NFR-0002 Simultaneous action | x | x | x |
| | NFR-0003 Data protection | x | x | x |
| | NFR-0004 Authentication | x | x | x |
| | NFR-0005 Data Format | x | | x |
| | NFR-0006 Currency | x | x | |
| | TRQ-0001 Operating System | x | x | x |

Figure 10: Traceability Matrix: General Requirements - Non-functional requirements

| General Requirements | | | | |
|-----------------------|-----------------------------|--|------------------------|------------------------------|
| | | GR-0001 Sign -Up and Request Card | GR-0002 Place Order | GR-0003 Manage Product |
| detailed requirements | IRQ-0001 Backend-Program | x | x | x |
| | IRQ-0002 PayPal | x | x | |

Figure 11: Traceability Matrix: General Requirements - Integration requirements

A | Appendix

A.1 1st Meeting with Erasmus Club Sevilla

| | |
|-----------|--|
| Meeting | Initial Meeting with Nabil |
| Date | 08.10.2021 |
| Place | Office of Erasmus Club Sevilla |
| Attendees | Nabil Bouazzi, Lea Ross, Agata Socha |
| Results | The project team will write an E-Mail with all open questions to Nabil Bouazzi so that he has time to prepare answers until the next meeting. The E-Mail with the answers will be send latest in the evening of the 8th of October 2021. |
| Comments | No comment |



Figure 12: First Meeting with Nabil

- Introduction
 - Introduced ourselves
 - Introduced our project
 - * As Erasmus students we will do a project for our subject "Requirements Engineering". The aim of this course is to prepare an application based on the client's requirements that will improve the operation of a small organization or company.
- Willingness to cooperate
 - Explaining the scope of the cooperation during the semester (2-3 meetings and e-mail contact)
 - Ask if they want to cooperate with us and if they would like to optimize their system.
- Current situation

- How do they work? How does the organisation work, who is working and who is responsible for what?
 - * ECS is an organisation made for erasmus students.
 - * There are 2 owners
 - * There are a few employees - students who help with certain activities
 - * There are no strict roles, all employees do almost everything that is needed
- How the current system looks like
 - * There is website where students can purchase events and trip
 - * There is no connected payment system
 - * To pick up the ECS card or tickets to a party, people sometimes have to come to the office
 - * The website has almost all needed functions but is not user-friendly. The Website mostly meets the expectations of the owners.
 - * ECS also has its own group in Whatsapp and they use it to communicate with their customers.
- Why do they want to change it?
 - * To make it more useful and easily accessible for students and to increase student satisfaction
 - * They want to optimize the system, to improve customer satisfaction.
- What needs to be improved?
 - What do they want to improve?
 - * customer profile - it would be nice for customers if they can see all events they have bought/attended to.
 - * selling process - right now people can sell it on their own, mainly looking for people who are interested in the Whatsapp group
 - Which new functions should be implemented?
 - * notification system
 - * payment system
 - * digital ECS card
- Summary
 - Main goal - to introduce a mobile application to make it easier and more useful for students.
 - We will send the summary via email to check if we correctly understood all requirements.

A.2 2nd Meeting with Erasmus Club Sevilla

| | |
|-----------|---|
| Meeting | Second Meeting with Erasmus Club |
| Date | 05.11.2021 |
| Place | Office of Erasmus Club Sevilla |
| Attendees | Christina Dsubanko, Florian Gamillscheg, Agata Socha, Tarik |
| Results | The project team will work on the discussed requirements and keep the customer informed about the process of the project. |
| Comments | No comment |



Figure 13: Second Meeting with Tarik

- Introduction
 - Goal of this meeting: to discuss our work and clarify if there are changes to the already known requirements.
- How does the current hardware setup look like? (database, webserver etc...)
 - everything is done by the company "zerotec".
- How does the current software solution look like?
 - The software needed for administrative matters - Professional Website;

- to manage accounts, trips etc -> Google Analytics, other Google tools connected with the professional website
- Do you have more requirements for the new app; maybe students complained about something and you would like to improve it?
 - digitized tickets with QR Code
- Summary + photo

A.3 Validation Meeting with Erasmus Club Sevilla

| | |
|-----------|---|
| Meeting | Validation Meeting with Erasmus Club |
| Date | 15.12.2021 |
| Place | Office of Erasmus Club Sevilla |
| Attendees | Christina Dsubanko, Florian Gamillscheg, Agata Socha, Lea Ross, Tarik |
| Results | The customer is happy with the proposed prototype and mentioned some wishes for the future. |
| Comments | No comment |

- Introduction
 - Goal of this meeting: to show our developed user interface and clarify whether the development fulfills all requirements of the customer.
- What feedback did we receive?
 - the user interface looks very good, the customer is especially happy with the realization of the digital ECS Card.
 - the changes that were mentioned by the beta-user are points that should be worked on in the future.
- What wishes are there for the future?
 - beta user feedback
 - * possibility to only delete one product in the shopping cart
 - * make prices more visible in the overview of the products
 - * show price also in the product details view

- introduce a filter-bar, so that participants of trips can be filtered according to certain criteria
- introduce a search bar, so it is possible to also search for specific students
- digitized tickets with QR-Code (already mentioned in last meeting)
- make user in userlist clickable
- add the prices of each product to product overview

A.4 1st Interview with customers of Erasmus Club Sevilla

Interview with customers of Erasmus Club Sevilla (carried out on the 15.10.2021 with Giulia Bono and Giorgia Daraio)

1. Since when are you a member of Erasmus Club?

We are members since we arrived in Sevilla for this semester that was in the middle of September 2021. We also have the Erasmus Club Card since this time.

2. Did you ever lose your physical Erasmus Card?

We never really lost our Erasmus Card, but it happened to us that we couldn't find it had to pay for the entrance at a club.

3. Would you prefer to have a digital ErasmusCard, available on your phone?

Yes, that would be a huge improvement.

4. How do you book trips/parties with Erasmus Club?

We mostly book the trips in the office in Triana as we don't have to pay a fee if we pay with cash. If we don't have time to go to the office, we book the trip online on the web page.

5. What do you think about the purchasing process for trips?

We don't like the fact that we have to go to the office in order not have to pay a fee. If we don't have time or we have classes during the opening hours of the office, we might not be able to get a space if the tickets are limited.

6. What do you think about the purchasing process for parties?

The problem is, that the purchasing procedure depends on the location of parties. Some tickets can only physically be picked up in the office, some tickets can be bought online. We would like to be able to purchase all tickets online without paying a fee.

7. Which payment method do you normally use? Is it convenient for you?

We normally pay cash because that way we don't have to pay the fee. But this is inconvenient because we have to go to the office. So sometimes we pay online but we don't really like that either.

8. Have you ever cancelled a trip/party?

If yes, what do you think about the cancellation process? So far, we have never cancelled a trip.

9. Have you ever sold a ticket that you have purchased?

If yes, what do you think about the resale process? So far, we have never sold a ticket to another person.

10. What application do you use to receive information about a trip/party?

There is the WhatsApp group of all students and there is also information on the web-page. In addition, we get sent information by e-mail. Sometimes thesees information are not the same so that in the end we don't know which information we should count on.

11. Can you think of anything that Erasmus Club could improve in context to the booking/payment process ?

The online payment should be for free.

12. If Erasmus club would provide a central, mobile application, also including a digital Erasmus Club Card - would you download it and use it?

Yes, we would really like this because the physical card can get lost very fast.

A.5 2nd Interview with customers of Erasmus Club Sevilla

Interview with customers of Erasmus Club Sevilla (carried out on the 10.12.2021 with Giorgia Daraio after showing her the first prototype of our user interface)

1. When you look at the prototype is there something that could be improved in the process of purchasing a product?

When I have selected multiple products and go to my shopping cart, I can only delete all of them at once - I don't have the possibility to only delete one or two products. It could happen that I accidentally put one trip in the shopping cart and want to delete just this one trip. If I have to delete all trips to that, I have to choose all of them again. It would also be nice to see, next to the icon of the shopping cart, how many items I have already put into it.

The prices in the selection of the trips should be bigger and on the other side of the box - that would make them stand more out.

When selecting one product to see the details, the price is no longer shown. It would be good to see it again in the details, otherwise I would have to remember it.

I would also like to see a section that tells me, what is not included in the trip. This is a function that is available on the web page and always helps me to assume the additional costs that I have to consider.

2. When you look at the prototype is there something that could be improved in the process of managing a product?

Once I have booked a trip, it would be nice if there could also be a map included showing me all the interesting places in the city/region where I am going.

3. What do you think is the biggest improvement when looking at the prototype?
I really like the fact that there is now a digital ECS-Card which means I don't always have to remember to bring the physical one. I also like the idea of having one application where I can get all the information rather than collecting the information from different sources.

Bibliography

- [1] Erasmus Programme. Erasmus Facts, Figures & Trends. https://ec.europa.eu/assets/eac/education/library/statistics/erasmus\protect\discretionary{\char\hyphenchar\font}{}{}plus\protect\discretionary{\char\hyphenchar\font}{}{}facts\protect\discretionary{\char\hyphenchar\font}{}{}figures_en.pdf, 2014.
- [2] Erasmus Club Sevilla. Erasmus Club Sevilla Website. <http://erasmusclubsevilla.com>, 2021.