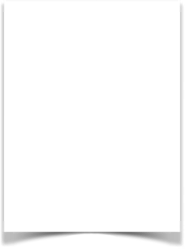
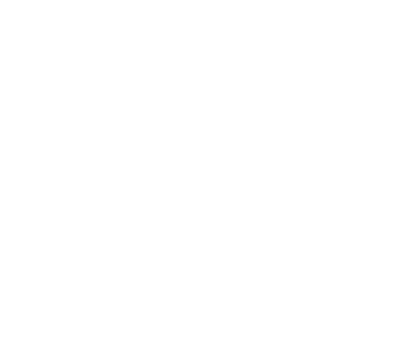
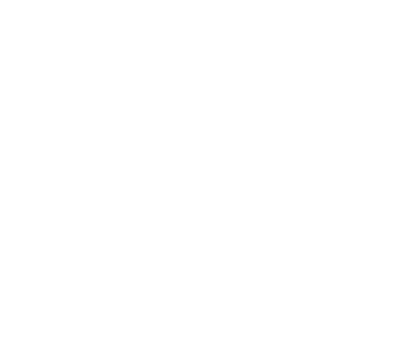
Cairo University

Faculty of Graduate Studies for Statistical Research

Professional Diploma in Software Engineering



Graduation Project

KAFALA

Supervised by

Dr.Atef Raslan

2021

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Abstraction

As Orphanages are increasing in day to basis simultaneously the helping hands are also increasing in a higher range. The practical difficulty is finding out the real orphans .

So we are developing a website help to reach the Orphanages which allows the users to search and find the orphanages on internet and then they can donate with the orphanages whichever they want.



Chapter 1

Introduction

1. Problem definition and Analysis

1.1 Introduction:

Although there is no accurate official statistics in Egypt on orphaned children, it is estimated that their number ranges from 3% to 5% of the population. This project allows many people to reach out for children whose need help by either internal sponsorship which allow them to support children needs with donating money Or external sponsorship which allow them to has the child and give him the care and support he needs to grow. With kafala we will have a view of both the children in need and the donation that get into the orphanage. that leads us to have accountability for money that get into the orphanage.



1.2 Project background:

As a result of the COV crisis and material difficulties due to the scarcity of donations, associations face problems in helping children, especially newborns, they need milk, special clothing and continuous care.so, that was the reason for kafala to exist to have more awareness of orphans needs and connect sponsors with the orphanage for the orphans to have their basic needs of life.

1.3 project objective:

* Helping the community for decreasing the number of children without a family or shelter and thus assisting them



* Provide kids with better life like in education and reducing the cases of homeless, kidnapping and child exploitation.
* The team will work for planning, analysis, implementation, designing, testing the application to be ready for use by developing controlled software with Effectively, accurate, ease of use standard criteria
* The application intend to achieve to reach the largest number of users.

1.4 Stakeholders:

Stakeholder is anyone who can affect or is affected by an organization, strategy or project. They can be internal or external and they can be at senior or junior levels.

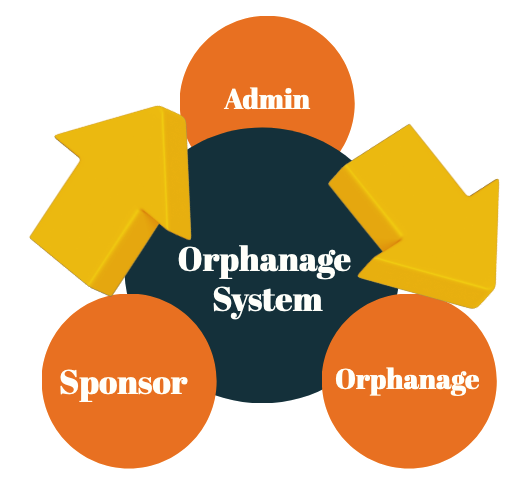


Figure 1.4.1 - Show Stakeholders Relations

2.1 Overview :

* Orphanage :  
  Any Orphanage will be register in our system (website or mobile application ), If information for Orphanage is correct , the admin will activate the orphanage account.After approved Orphanage can add and update all child's inside Orphanage , and The orphanage that able to upload pictures for children and can display the cost of child care through the application. Each child has a monthly cost of caring for him. Anyone can take care of this child.

Chapter 2

Overview System



* Sponsor :  
  Any User above 18 age can register our application , If information for Sponsor is correct , the admin will activate the Sponsor account. Sponsor can view the child inside application or website . Sponsor can send request for Orphanage to view child , but If Sponsor need to adopt . If a person wants to sponsor a child, he must send a request to the admin responsible for each orphanage . Any Sponsor can sponsor the child in the orphanage by paying the costs of caring for him on a monthly basis .
* Admin :

Admin can approve for Orphanage after check for information . Admin can view all child inside any Orphanage , admin can view all request for take care the child outside Orphanage that request may be approve or reject or delete according the sponsors information ,may be Sponsor he isn’t able to take care for child in his home .

2.2 Functional Requirements



2.3 Used Technologies:

* Software development diagrams (Use case diagram, Class Digram) using Draw.IO.
* Back-end (server-side - API) implemented by Django Framework using python .
* Front-end (client-side) implemented by Django Framework using MVT Design Pattern.



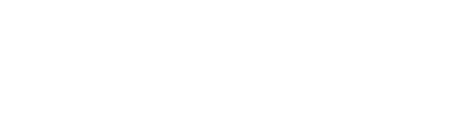
* Styling user-interface implemented by CSS & Bootstrap.
* Version control system with Github .

Chapter 3

Extreme Programming 

What is Extreme Programming Process Cycle ?

Extreme Programming is iterative and incremental and is driven by Time-Boxed Cycles. Therefore, the rhythm of the Extreme Programming process is crucial.



Extreme Programming has the following activity levels −

* Product Life Cycles
* Releases
* Iterations
* Tasks
* Development
* Feedback

Each of the activity levels provides the minimal inputs required for the next level. They are −

* Product life cycle activities provide inputs for release cycles.
* Release planning sessions provide inputs for iteration cycles.
* Iteration planning sessions provide inputs for task cycles.
* Task development provides inputs for development episodes.
* Development produces the product.
* Feedback is a continuous activity throughout the project and across all the above activity levels.

When Should Use Agile XP Methodology?



* Dynamically changing software requirements
* Risks caused by fixed time projects using new technology
* Small, co-located extended development team
* The technology you are using allows for automated unit and functional tests
* **Tiny teams:** your team should have between 2-12 members
* **Risk reduction:** your team is working on a project with tight deadlines, and wants to mitigate risks
* **Close connection:** your client must be able to work very closely with your team
* **Distinguished developers:** your team should have committed and highly experienced developers
* **Rapid requirements:** your team needs to adapt quickly to fast-changing project requirements .

According Chapter 3 we will using Extreme Programming in Our Project

Chapter 4

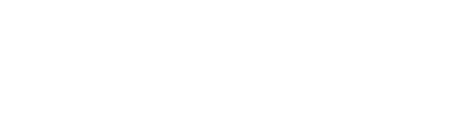
Exploration Phase (User Stores)

According XP Methodology , User stories give us some insight and a way to see stakeholders and end users as people needing something from us rather than some random customer. This will create buy-in on the team side of things, and the client will feel heard and understood. also user story is an informal, natural language description of features of a software system.

4.1 Orphanage User Story :

In practice, Orphanage stories might look like these:

* Orphanage can Register by website or app

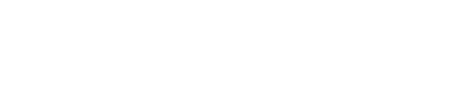


* No access without approved by admin
* After approved every Orphanage can add all child information or medication it
* An orphanage can view the sponsors who have children who are taking care of the orphanage.
* Orphanage made Black List to add Orphanage who do not take care of children properly
* An orphanage can update and modification its information
* An orphanage can view the sponsors appointment for view child.

Register Orphanage :

|  |  |
| --- | --- |
| Story No | 1 |
| Story Name | Register Orphanage |
| Size |  |
| Priority | High |
| Release |  |
| Acceptance Criteria | 1. Orphanage fill his information and attach his paper 2. ***Orphanage information*** as the following:    1. Name of Orphanage    2. Username    3. Password    4. Confirm Password.    5. ID no, inside ministry.    6. Number Telephone Orphanage    7. Government    8. City    9. Full address 3. Orphanage can login after approved |
| Constraint | 1. Orphanage can’t login without approved by admin. 2. Account will be active after checking |
| Risk probability | High |
| Story No | 1 |
| Story Name | Login Orphanage |
| Size |  |
| Priority | High |
| Release |  |
| Acceptance Criteria | 1. Orphanage login with username and password. 2. The username may be email; it would name or number of ministry of Social Solidarity. 3. After Submit Orphanage can login and view his profile. |
| Constraint | 1. No Login without approved by admin. 2. Every admin is responsible for one account. 3. Admin for account is manger or work in Orphanage. |
| Risk probability | High |

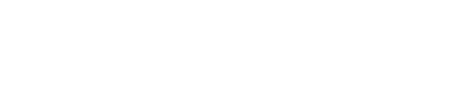
Update profile :



|  |  |
| --- | --- |
| Story No | 2 |
| Story Name | Update profile |
| Size |  |
| Priority | High |
| Release |  |
| Acceptance Criteria | As a user I want to be able to update on the orphanage data so that I can simplify and accelerate the business process of requests |
| Constraint | Must be an admin user |
| Risk probability | Low |

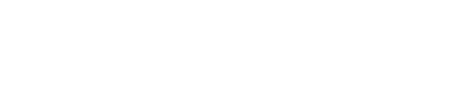
Add Child :

|  |  |
| --- | --- |
| Story No | 3 |
| Story Name | Add Child |
| Size |  |
| Priority | High |
| Release |  |
| Acceptance Criteria | 1. The orphanage contains a group of children. admin can add the children who are in the care home. 2. Admin must provide information for child as the following:    1. Name    2. Age.    3. Date of Birth.    4. Category of Child (The category to which the child belongs in terms of age.).    5. Cost of living: (monthly living costs).    6. Warranty type: (internal warranty - external warranty).    7. Pictures of the child: (the child's photos appear in case it is an external warranty).    8. His Dream. 3. after admin can add the children , will show in the list of children in the orphanage . |
| Constraint | 1. Name, Category of child , Cost of living is required . 2. The name of orphanage in will’t be shown in app or website without add child |
| Risk probability | Low |



Update Child :

|  |  |
| --- | --- |
| Story No | 4 |
| Story Name | Update Child |
| Size |  |
| Priority | Medium |
| Release |  |
| Acceptance Criteria | 1. After select child from Preview List of Child 2. Admin can update the information for child as the following:    1. Name    2. Age .    3. Date of Birth .    4. Category of Child (The category to which the child belongs in terms of age .).    5. Cost of living: (monthly living costs).    6. Warranty type : (internal warranty - external warranty).    7. Pictures of the child: (the child's photos appear in case it is an external warranty) .    8. His Dream 3. after admin update the children information, will show direct in the list of children in the orphanage . |
| Constraint | 1. Name , Category of child , Cost of living is required . 2. The name of orphanage in will’t be shown in app or website without add child . 3. Update child information available for admin of Orphanage only |
| Risk probability | Low |



|  |  |
| --- | --- |
| Story No | 5 |
| Story Name | Delete Child (freeze case ) |
| Size |  |
| Priority | Medium |
| Release |  |
| Acceptance Criteria | 1. After select child from Preview List of Child 2. Admin can delete the information for any child . |
| Constraint | 1. Freeze child information and should be available for admin of Orphanage only. 2. If admin delete all child, The Name of Orphanage will ’t be shown in app or website. 3. Freeze cases shouldn’t have any sponsors , preview in search . |
| Risk probability | Low |

Delete Child (freeze case )



Preview and Search List of Child

|  |  |
| --- | --- |
| Story No | 6 |
| Story Name | Preview and Search List of Child |
| Size |  |
| Priority | Medium |
| Release |  |
| Acceptance Criteria | 1. Admin can preview list of all child inside orphanage. 2. These list can have filtered by age, category, category of Child and warranty type. 3. Admin can search 4. From this list admin can select any child and update or delete this information . |
| Constraint |  |
| Risk probability | Low |



give feedback about Sponsor

|  |  |
| --- | --- |
| Story No | 7 |
| Story Name | give feedback about Sponsor |
| Size |  |
| Priority | Low |
| Release |  |
| Acceptance Criteria | * Sponsor should be fill request for adaption. * Sponsor should have appointment with orphanage before. |
| Constraint | * Orphanage should have an appointment with the sponsor before give feedback |
| Risk probability |  |



4.2 Sponsor User Story :

In practice, Sponsor stories might look like these:

* As a sponsor, the user can register and log in his account, no privilege to create user.
* User can update info his information
* User can search for orphanages then choose adoption category.
* User can view all Orphanage was registered by admin.
* User can view all children after selecting the Orphanage.
* User can filter displayed data depends on different filters like (ex: child age).
* User can write feedback on Orphanage profile.
* User can confirm Appointment decided by orphanage to see the child who he chooses.

Register sponsor



|  |  |
| --- | --- |
| Story Number | 1 |
| Story Name | Register sponsor |
| Size |  |
| Priority | 1 |
| Release |  |
| Acceptance Criteria | As a sponsor you can register easily by follow the steps and write valid username and password too.   1. Sponsor information as the following :    1. First Name    2. Middle Name    3. Last Name    4. Age    5. Civil Id or Passport number    6. Country    7. City    8. Address    9. Username    10. Password 2. Username may be his name or mobile number 3. you can save your logging in order to login automatically next time 4. After registration you have access to login and view orphanage 5. As a registered user, you able to request a new password if you forget the old one |
| Constraints | - Sponsor fill the required mandatory information  - Admin approved sponsor registration after checking his data. |
| Risk probability | Low |

|  |  |
| --- | --- |
| Story Number | 2 |
| Story Name | Login sponsor |
| Size |  |
| Priority | 1 |
| Release |  |
| Acceptance Criteria | User enters valid data (username, password and E-mail). |
| Constraints | No login without follow the instructions and enter valid username and password |
| Risk probability | Low |

Login sponsor



Update sponsor’s information

|  |  |
| --- | --- |
| Story Number | 3 |
| Story Name | Update sponsor’s information |
| Size |  |
| Priority | 1 |
| Release |  |
| Acceptance Criteria | User has valid account on application. |
| Constraints | No update without follow the instructions and enter valid username and password |
| Risk probability | Low |

|  |  |
| --- | --- |
| Story Number | 4 |
| Story Name | Search orphanage |
| Size |  |
| Priority | 2 |
| Release |  |
| Acceptance Criteria | User has an account then log in to the application |
| Constraints | User enters valid data |
| Risk probability | Low |

Choose sponsorship category “Internal”

Search orphanage



|  |  |
| --- | --- |
| Story Number | 5 |
| Story Name | Choose sponsorship category “Internal” |
| Size |  |
| Priority | 2 |
| Release |  |
| Acceptance Criteria | * User can enter valid data to log in his account * User can check specific orphanage and choose from the list * User can search and select his child by gender, age or brief story about the case of child. |
| Constraints | * User has valid account on kafala application. |
| Risk probability | Low |

Choose sponsorship category “External”



|  |  |
| --- | --- |
| Story Number | 6 |
| Story Name | Choose sponsorship category “External” |
| Size |  |
| Priority | 2 |
| Release |  |
| Acceptance Criteria | * User selects external sponsorship, check some information about the child like "name, age, orphanage the he belong to, brief about his personality, hobbies, and his dream. * User has access for checking children pictures * the application will guide you with all the process and follow your request online * User will upload his national id, criminal records certificate, graduated certificate, income certificate, work permission letter, virus C,B letter, 2 other person for witnesses when signing the contract between the ministry and the new family "sponsor" ,apartment contract for rent or ownership, a copy of electricity, water or gas receipt ,children’s certificates in case the family has already children's and Marriage certificate |
| Constraints | * User doesn’t have permission for access pictures without uploading all his official documents * External sponsorship only available and approved by ministry of Social Solidarity. |
| Risk probability | Low |

View children



Requesting

|  |  |
| --- | --- |
| Story Number | 7 |
| Story Name | View children |
| Size |  |
| Priority | 2 |
| Release |  |
| Acceptance Criteria | * User has valid account * User already choose an orphanage on the application |
| Constraints | * User should choose orphanage and select adoption category |
| Risk probability | Medium |

|  |  |
| --- | --- |
| Story Number | 8 |
| Story Name | Requesting |
| Size |  |
| Priority | 2 |
| Release |  |
| Acceptance Criteria | * User has valid account then select adoption category. * Requests like * User can request for back kid again * User can request for taking kid with him abroad * User can request for changing sponsorship |
| Constraints | * User should has valid account on our system * User should complete all required papers for his request |
| Risk probability |  |

|  |  |
| --- | --- |
| Story Number | 9 |
| Story Name | Review and tracing his request |
| Size |  |
| Priority | 2 |
| Release |  |
| Acceptance Criteria | * User can review and edit his request before summiting to admin and confirm * User can trace his request in case of applying for external sponsorship * User can see processing statue like Holding, waiting list, going to approved, approved,…etc * User write letter for clarification of being surrogate parents, and shown his goodwill, child preservation and taking care about him. |
| Constraints | * User should has valid account on our system * User should attach all the required documents |
| Risk probability | High |



Review and tracing his request

|  |  |
| --- | --- |
| Story Number | 10 |
| Story Name | Cancel the request |
| Size | 2 |
| Priority |  |
| Release |  |
| Acceptance Criteria | * User should has an account on our system * User can clarify the reason of cancellation * User can return back after cancellation order within specific determined time |
| Constraints | * No cancellation without login with username and password |
| Risk probability | High |



Cancel the request

Give feedback

|  |  |
| --- | --- |
| Story Number | 11 |
| Story Name | Give feedback about orphanage whom deals with |
| Size |  |
| Priority | 3 |
| Release |  |
| Acceptance Criteria | * User should enter valid username and password to submit his review * User can submit feedback about the application and orphanage |
| Constraints | * User should has an account on our application * User should deal with the orphanage before giving the feedback |
| Risk probability | High |

|  |  |
| --- | --- |
| Story No | 1 |
| Story Name | Login Admin |
| Size |  |
| Priority | 1 |
| Release |  |
| Acceptance Criteria | 1. write right login username and password which be taken before from a developer. |
| Constraint | Uppercase letter should be right |
| Risk probability | High |

4.3 Admin User Story :



Login Admin

Active or dis-active or delete Orphanage

Active or Dis-active or delete sponsor

Approve update sponsor’s information

|  |  |
| --- | --- |
| Story No | 2 |
| Story Name | Active or dis-active or delete Orphanage **As an Admin** |
| Size |  |
| Priority | 1 |
| Release |  |
| Acceptance Criteria | 1. Admin open a window contains the waiting for activation orphanages to activate it.  2. Admin verifies inserted orphanage data.  3. Admin activates the verified orphanage.  4. After activating the orphanage it can access the system.  5. Admin open a window contain the orphanages with the ability to deactivation it after adding the reason.  5. After deactivating the orphanage can no longer access the system.  6.Admin can delete orphanage in case of risk data |
| Constraint | 1. No activation can be done if information is not completed.  2. No activation can be done if the orphanage data is not fully accurate.  3. Orphanage current status must be inactive.  4. Deactivation must have a reason inserted.  5.Reason must be at least 100-character of length. |
| Risk probability | High |

|  |  |
| --- | --- |
| Story No | 3 |
| Story Name | Active or Dis-active or delete sponsor **As an Admin**. |
| Size |  |
| Priority | 1 |
| Release |  |
| Acceptance Criteria | 1. Admin open a window contains the waiting for activation sponsors to activate it.  2. Admin verifies inserted sponsors data.  3. Admin open a window contain the sponsors with the ability to deactivation it after adding the reason.  4. After deactivating the sponsor it can no longer access the system.  5. Admin can delete sponsor in case of risk data |
| Constraint | 1. No activation can be done if information is not completed.  2. No activation can be done if the sponsor’s data is not fully accurate.  3. sponsor’s current status must be inactive.  4.Deactivation must have a reason inserted.  5.Reason must be at least 100-character of length. |
| Risk probability | High |

|  |  |
| --- | --- |
| Story no | 4 |
| Story Name | Approve update sponsor’s information **As an admin**. |
| Size |  |
| Priority | 1 |
| Release |  |
| Acceptance Criteria | 1.admin can approve any update of a sponsor’s information.  2.admin can approve or disapprove updating information of a sponsor.  3.admin can send an explanation of the disapprove. |
| Constraint | 1. admin cannot change sponsors information. |
| Risk probability | Low |

|  |  |
| --- | --- |
| Story no | 5 |
| Story Name | Approve update orphanage’s information **As an admin.** |
| Size |  |
| Priority | 1 |
| Release |  |
| Acceptance Criteria | 1.admin can approve any update of an orphanage’s information.  2.admin can approve or disapprove updating information of an orphanage.  3.admin can send an explanation of the disapprove. |
| Constraint | 1. admin cannot change orphanage information. |
| Risk probability | Low |

|  |  |
| --- | --- |
| Story No | 6 |
| Story Name | View children **As an Admin.** |
| Size |  |
| Priority | 2 |
| Release |  |
| Acceptance Criteria | 1. Admin can make reports for each orphanages’ children  2. Admin can print reports  3- Admin can filtrate children for each orphanages |
| Constraint | No constraint |
| Risk probability | Low |

|  |  |
| --- | --- |
| Story No | 7 |
| Story Name | View orphanages **As an Admin.** |
| Size |  |
| Priority | 2 |
| Release |  |
| Acceptance Criteria | 1. Admin can make reports for all orphanages existed in the App  2. Admin can filtrate orphanages by place  3. Admin can filtrate orphanages by numbers of children  4. Admin can filtrate orphanages by its rate |
| Constraint | No constraint |
| Risk probability | Low |

Approve update orphanage’s information

Vi. View children

Vi. View orphanages

Vi. View requests

Approve or dis-approve requests

|  |  |
| --- | --- |
| Story No | 8 |
| Story Name | View requests **As an Admin.** |
| Size |  |
| Priority | 2 |
| Release |  |
| Acceptance Criteria | 1. Admin can view all requests in order to approve or disapprove each request later  2. Admin can filtrate requests by category |
| Constraint | No constraints |
| Risk probability | Low |

|  |  |
| --- | --- |
| Story No | 9 |
| Story Name | Approve or dis-approve requests **As an Admin.** |
| Size |  |
| Priority | 2 |
| Release |  |
| Acceptance Criteria | 1. Admin can see all requests and approve requests if it have a valid information 2. Admin can see all requests and dis-approve requests if it have not a valid information |
| Constraint | 1.Have to confirm the approval or the dis approval |
| Risk probability | Low |

|  |  |
| --- | --- |
| Story No | 10 |
| Story Name | Search Orphanage **As an Admin**. |
| Size |  |
| Priority | 2 |
| Release |  |
| Acceptance Criteria | 1. Admin open a window with several Searching Methods, Export Result availability to Access orphanage data.  2. Admin can search for orphanage waiting for activation.  3. Admin can search for orphanage by City.  4. Admin can search for orphanage by Area.  5. Admin can search for orphanage by Phone No.  6. Admin can search for orphanage by Name.  7. Admin can search for orphanage by Commercial registration No.  8. A mixed mode of filtering is allowed.  9. Admin can Export the search result as excel file.  10. Admin can Access the orphanage data. |
| Constraint | 1. Numerical values is not allowed in the search criteria.  2. Special characters is not allowed in the search criteria. |
| Risk probability | None |

|  |  |
| --- | --- |
| Story No | 11 |
| Story Name | Search Sponsor **As an Admin**. |
| Size |  |
| Priority | 2 |
| Release |  |
| Acceptance Criteria | 1. Admin open a window with several Searching Methods, Export Result availability to Access orphanage data.  2. Admin can search for sponsors by (Has adoption request).  3. Admin can search for sponsors by (Has adoptions).  4. Admin can search for sponsors by (Has Kafala).  5. Admin can search for sponsors by (orphanage).  6. Admin can search for sponsors by Country.  7. Admin can search for sponsors by Phone No.  8. Admin can search for sponsors by ID No.  9. Admin can search for sponsors by Name.  10. A mixed mode of filtering is allowed.  11. Admin can Export the search result as excel file.  12. Admin can Access the sponsors data. |
| Constraint | 1. Numerical values is not allowed in the search criteria.  2. Special characters is not allowed in the search criteria. |
| Risk probability | None |

Search Orphanage

Search Sponsor

|  |  |
| --- | --- |
| Story no | 12 |
| Story Name | View reviews of sponsors and orphanage **As an admin**. |
| Size |  |
| Priority | 3 |
| Release |  |
| Acceptance Criteria | 1.admin can see all reviews of sponsors and orphanage.  2.admin can hide a review. |
| Constraint | 1.admin cannot add a review.  2.admin cannot edit a review. |
| Risk probability | Medium |

|  |  |
| --- | --- |
| Story No | 13 |
| Story Name | View payments **As an admin.** |
| Size |  |
| Priority | 3 |
| Release |  |
| Acceptance Criteria | 1.admin can view payment of all sponsors. |
| Constraint | 1.cannot change the payment amount |
| Risk probability | Low |

Chapter 5

Extreme Programming 

