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Acknowledgement

First and foremost, we want to express our gratitude to our Module leader Mr. Rabin Thapa, as well as professors Mr. Mukesh Regmi, for their unwavering support and encouragement. We would like to offer our gratitude for this fantastic learning experience.

Without the help of the group members, tutors and friends, We would not have been able to complete this coursework. Everyone, including myself, has had a lot of chances and possibilities to study and investigate about new things over the completion period, which has significantly polished our research skills. We owe a debt of gratitude to everyone who has helped us throughout this module.

Introduction

The given task is an individual coursework to determine our knowledge and skills developed throughout this semester. For the group work we had to divide the task among the group members and as for the individual task we were told to select the one of the given five function and to produce the number of analysis and design of a particular part of the system.

Software engineering is a structured and observable approach of producing software. From a functional aspect, an examination of how software is created. It includes software designs, research, and performance assurance. In addition, it describes how to use and maintain the software. In this coursework, we will create several diagrams related to the design process, in which we will first explain the design process and then design several process. A variety of diagrams must be generated and used for various reasons to make or create realistic software. Different diagram were used to analyze the requirements like ERD, Data Flow Diagram, Structure Chart, Data Dictionary, Process specs as well as module specs which made it easy to understand mechanism of the project. This coursework has taught us about structured software engineering and how to efficiently assess requirements and solve problems in a well-organized manner.

The objective of the task or coursework was to design and demonstrate the knowledge about the well-structured software engineering. During the coursework, all our group member learned to carry out our work in the group as well as to divide the task in the group. While doing the coursework we were given enough time to finish. All the group members were able to share their concept, idea which were very useful for the development or to work in the project. While working in the group task all our efficiency were increased by sharing concept of all the members and different mistakes were also found and changed accordingly. So, to finish our project which meets the real life concepts about the software development, all our group member gave their time, effort, idea which helped to finish the coursework within the given time.

3. INDIVIDUAL TASK

The individual task included our 20% of our coursework. We were told to select or choose the different function of the project and work on it. We had to include all the environmental model specification, internal model specification and design specification of the system which are as follows;

3.1 Purchase of football kits

3.1.1 Environmental model specification

Environmental model specification is the process of forming and modelling the framework of the system or project with different process. Following we can see the different part of the environmental model specification;

3.1.1.a. Context level diagram

Context level diagram is the diagram which helps to explain the relation and boundaries of between the systems with its environments. It is also known as level 0. DFD(Data Flow Diagram). We can see the example of the context level diagram in the following pages.

Figure 1 level 0/Content level diagram to purchase kit

3.1.2. Internal model specification

Internal model specification is the process of explaining the general notation which carries the knowledge about the features of the whole systems. Following are the example of it;

3.1.2.a.Level 1 DFD

Level 1 DFD is the same as level 0 DFD which shows or describes the sub-processes of the system which combined forms a whole system.

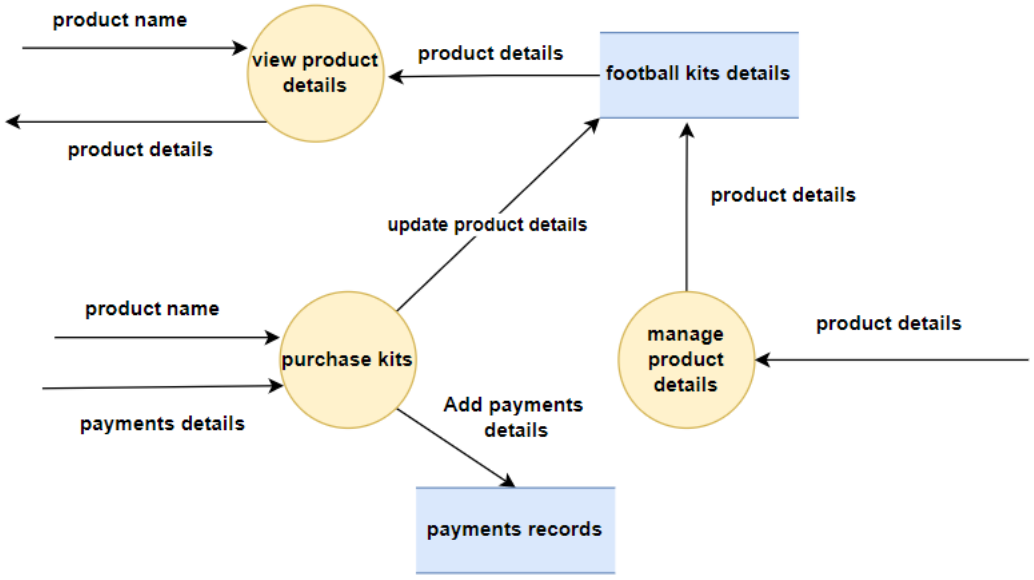

Figure 2 Level 1 DFD to purchase kits

3.1.2.b. Level 2 DFD

Level 2 is the highest abstraction level of DFD(Data Flow Diagram) which shows how the data are flowing in the module and system.

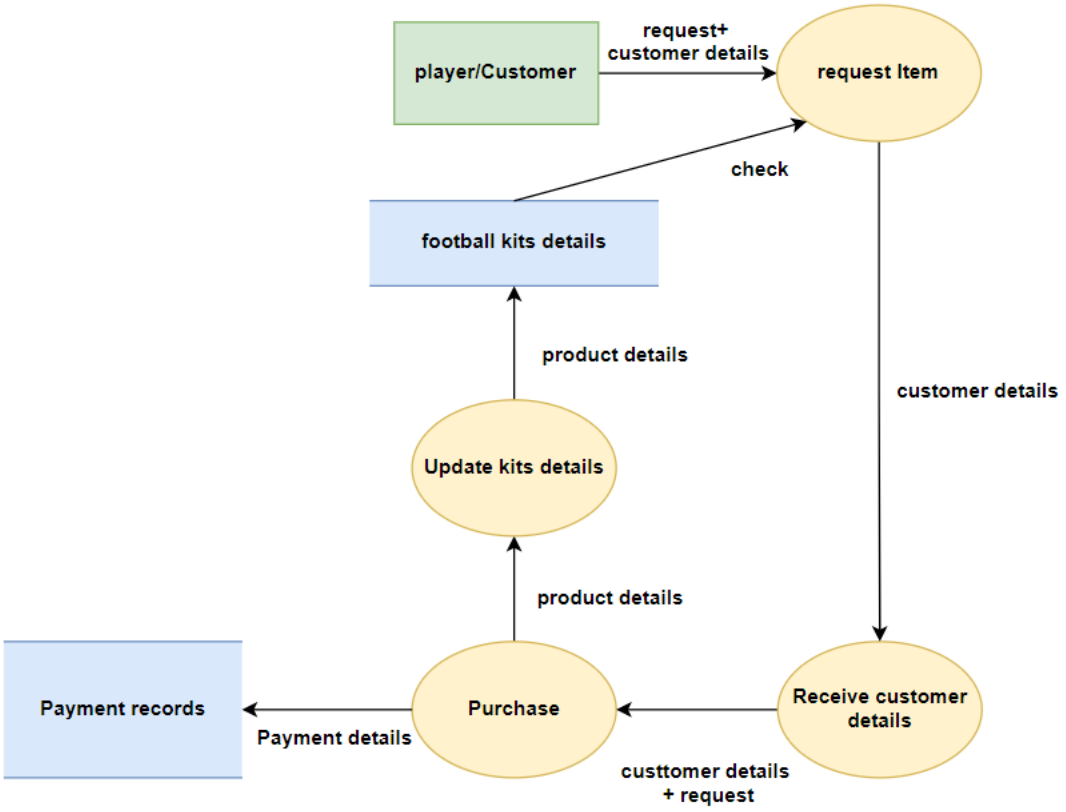

Figure 3 Level 2 DFD to purchase kits

3.1.3 Design specification

Design specification is the process of providing information regarding any project or product in the form pod documentation which may include environmental factor maintenance aesthetic factors etc.

3.1.3.a. Structure chart

Structure chart is the chart which shows the system lowest manageable levels which is mostly used in the software engineering project. Structure chart is derived from Data Flow Diagram(DFD) which provide more detail and information of the system.

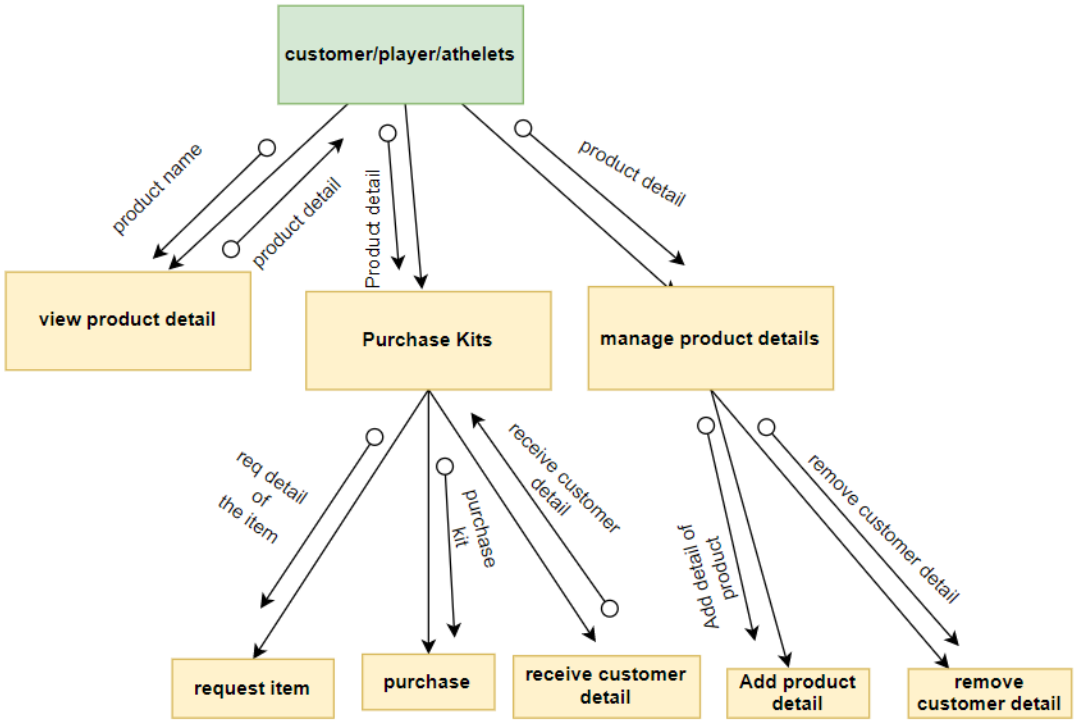

Figure 4 Structural chart for purchasing Kits

3.1.3.b. Module Specification

Module specification is the specification which module is supposed to do which task. The goal of the module specification is to give or provide the exact and make the other part of the software complete.

Module Name: PURCHASE OF FOOTBALL KITS

Purpose: The purpose to create this function it to provide essential items and kits to the student of the academy. So for buying the different items they must go through some process which are then recorded in the system especially the jersey of the professional footballer clubs.

Pseudocode:

START

Display(kits details)

Var kitName = input(“Enter Kit name”)

Updatekitdata(kitName)

Display (“successfully purchased!!”)

END

INPUT PARAMETER: kitName

OUTPUT PARAMETER: Updatekitdata(kitName)

GLOBAL VARIABLE:

LOCAL VARIABLE: kitName

CALLS: Updatekitdata()

CALLED BY: Main

4. Summary

After days of discussion and analysis, me and my group were successful to create the design for the system we named it as “T-14 Academy Management System”. While doing the task all our members of the group equally contributed for its completion. As the discussion of the project took long we were able to implement all the concept of Structural Chart, module specification, Data Dictionary, DFD, process modules and ER-diagram.

The above group and individual task includes all our work which are categorized into environmental model specification, data dictionary and design specification of the system. All the member of the group has contributed in the group as well as in the individual task. In the individual task section all the group member had to work on the environmental model specification, internal model specification and design specification which was compulsory for the individual function.

While working on the group, we ran into a number of problems with various parts of the report. We discussed the problem we were facing among the group members in order to find solutions. We held a group discussion to talk about the issues and try to come up with solutions. We conducted a research on software engineering concepts. We conducted research using a variety of books, internet, journals, and other resources to assist us finish our project. We met with the module lecturer on a regular basis and discussed our progress, which was very helpful. I would like to thank our module teacher for providing different materials and help when needed which has been a great help to our group.

So, after completion of the project, different skills like project managements problem solving, group communication which are required for the software engineering were developed. So, with the help of group members, module teacher and others resources we were able to complete the project within the given deadline.