

## Answers Week 2

C. Create a set of use cases for the following dentist office system...

### Use Case Description

|  |  |                        |
|--|--|------------------------|
| Use Case Name: Patient makes or changes an appointment   | ID: <u>1</u>   | Importance Level: High |
| Primary Actor: Patient   |  |                        |
| Short Description: This describes how a new appointment is made, or an existing appointment is changed.                    |  |                        |
| Trigger: Patient calls to schedule new appointment, or change an existing appointment.<br>Type: <b>External</b> / Temporal |  |                        |
| Major Inputs:<br>Description<br>Source<br><br>_____<br>_____<br>_____<br>_____<br>_____<br>_____                           | Major Outputs:<br>Description<br>Destination<br><br>_____<br>_____<br>_____<br>_____ |                        |

| Major Steps Performed | Information for Steps |
|-----------------------|-----------------------|
|                       |                       |

Use Case Description

|   |  |   |                        |
|---|--|---|------------------------|
| Use Case Name: Collect new patient information  |  | ID:<br><u>2</u>                           | Importance Level: High |
| Primary Actor: Patient  |  |   |                        |
| Short Description: This describes how new patient information is collected when a new patient arrives for an appointment. |  |   |                        |
| Trigger: New Patient arrives for appointment.<br>Type: <b>External</b> / Temporal   |  |   |                        |
| Major Inputs:   |  | Major Outputs:                            |                        |
| Description   |  | Description                               |                        |
| Source  |  | Destination                               |                        |
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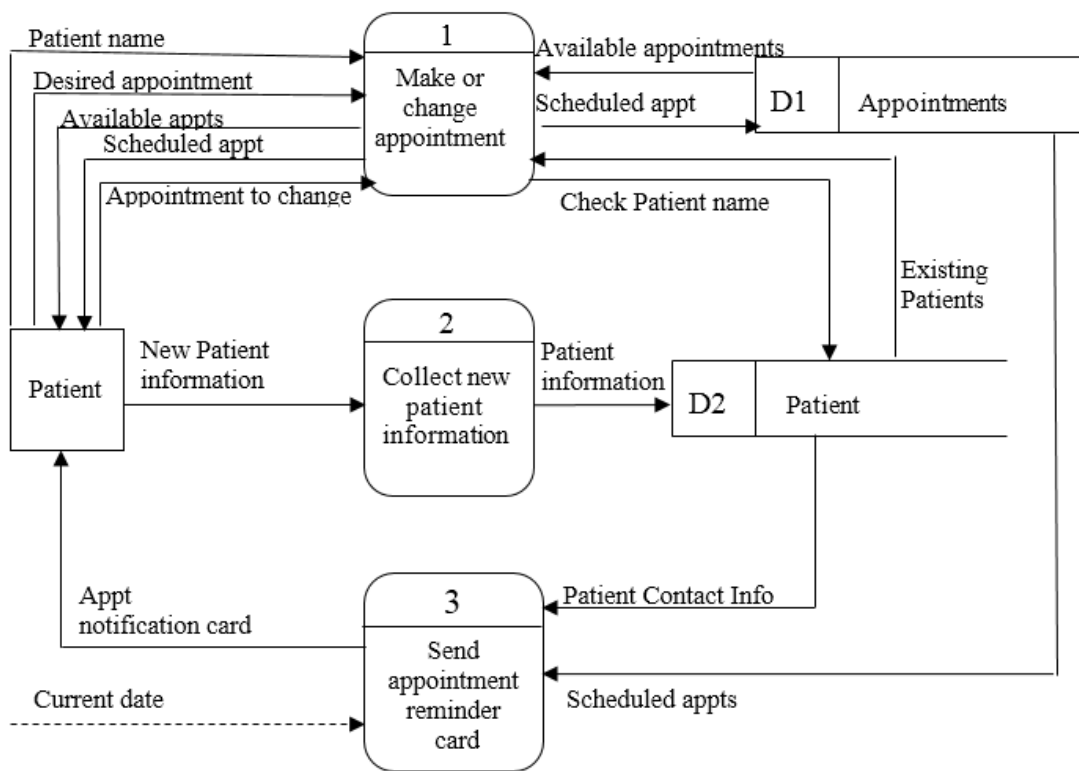
| Major Steps Performed | Information for Steps |
|-----------------------|-----------------------|
|                       |                       |

## Use Case Description

|   |   |                             |
|---|---|-----------------------------|
| Use Case Name: Send appointment reminder card   | ID: <u>  3  </u>  | Importance Level:<br>Medium |
| Primary Actor: System   |   |                             |
| Short Description: This describes how reminder cards are sent to patients two weeks prior to appointment.           |   |                             |
| Trigger: Time to send reminders two weeks before scheduled appointments.<br>Type: External / <b><u>Temporal</u></b> |   |                             |
| Major Inputs:<br>Description<br>Source<br><br>_____<br>_____<br>_____<br>_____<br>_____<br>_____                    | Major Outputs:<br>Description<br>Destination<br><br>_____<br>_____<br>_____<br>_____<br>_____ |                             |

| Major Steps Performed | Information for Steps |
|-----------------------|-----------------------|
|                       |                       |

D. Draw a level 0 DFD for the dentist office system in Exercise C.



E. Complete the use cases for the dentist office system in exercise B by identifying the steps and the data flows within the use cases.

### Use Case Description

|   |                         |                              |                        |
|---|-------------------------|------------------------------|------------------------|
| Use Case Name: Patient makes or changes an appointment  |                         | ID: <u>1</u>                 | Importance Level: High |
| Primary Actor: Patient  |                         |                              |                        |
| Short Description: This describes how a new appointment is made, or an existing appointment is changed.                   |                         |                              |                        |
| Trigger: Patient calls to schedule new appointment or change an existing appointment.<br>Type: <b>External</b> / Temporal |                         |                              |                        |
| Major Inputs:   |                         | Major Outputs:               |                        |
| Description   | Source                  | Description                  | Destination            |
| <u>Patient name</u>   | <u>Patient</u>          | <u>Scheduled appointment</u> | <u>Patient</u>         |
| <u>Desired appointment</u>  | <u>Patient</u>          | <u>Scheduled appt</u>        | <u>Appt file</u>       |
| <u>Appointment to change</u>  | <u>Patient</u>          | <u>Available appts</u>       | <u>Patient</u>         |
| <u>Available appointments</u>   | <u>Appointment file</u> | <u>Check Patient name</u>    | <u>Patient file</u>    |
| Existing Patients____   | Patient file            | _____                        | _____                  |
| _____   | _____                   | _____                        | _____                  |



| Major Steps Performed   | Information for Steps   |
|---|---|
| 1. Get patient's name. Check patient name with Patient file.  | Patient name<br>Patient File  |
| 2. If new patient, get address and phone number and enter in new patient file entry.  | Address   |
| 3. If this is an appointment change, find current appointment in appointment file, and cancel it.   | Phone number<br>New Patient information                                 |
| 4. Get desired appointment time and match with available appointments in Appointment file. When a suitable time is found, enter scheduled appointment in Appointment file and confirm with patient. | Appointment to change<br>Existing Appointments                          |
|   | Desired appointment<br>Available appointments<br>Scheduled appointments |

## Use Case Description

|   |  |   |                        |
|---|--|---|------------------------|
| Use Case Name: Collect new patient information  |  | ID:<br><u>2</u>   | Importance Level: High |
| Primary Actor: New Patient  |  |   |                        |
| Short Description: This describes how new patient information is collected when a new patient arrives for appointment.  |  |   |                        |
| Trigger: New Patient arrives for appointment.   |  |   |                        |
| Type: <b>External</b> / Temporal  |  |   |                        |
| Major Inputs:<br>Description<br>Source<br><br><u>New Patient information</u> <u>Patient</u><br>(Includes name, address,<br>Phone number and medical<br>History)<br>_____<br>_____ |  | Major Outputs:<br>Description<br>Destination<br><br><u>Patient Information</u> <u>Patient file</u><br>-<br>_____<br>_____ |                        |

| Major Steps Performed  | Information for Steps                                      |
|--|--|
| 1. When the patient arrives, determine if he/she has been seen before in this office. If they have not, have them fill out a patient information form. | Patient status   |
| 2. Use the information on the patient information form to update and complete the patient's entry in the patient file.                                 | Patient name<br>Address<br>Phone number<br>Medical history |

## Use Case Description

|   |                  |                               |                             |
|---|------------------|-------------------------------|-----------------------------|
| Use Case Name: Send appointment reminder card   |                  | ID:<br><u>3</u>               | Importance Level:<br>Medium |
| Primary Actor: System   |                  |                               |                             |
| Short Description: This describes how reminder cards are sent to patients two weeks prior to appointment. |                  |                               |                             |
| Trigger: Time to send reminders two weeks before scheduled appointments.                                  |                  |                               |                             |
| Type: External / <b><u>Temporal</u></b>   |                  |                               |                             |
| Major Inputs:   |                  | Major Outputs:                |                             |
| Description   | Source           | Description<br>Destination    |                             |
| <u>Current date</u>   | <u>Calendar</u>  |                               |                             |
| <u>Scheduled appts</u>  | <u>Appt file</u> | <u>Appt notification card</u> | <u>Patient</u>              |
| Patient Contact Info__  | Patient file_    | _____                         |                             |
| _____   | _____            | _____                         |                             |
| _____   | _____            | _____                         |                             |
| _____   | _____            | _____                         |                             |
|   |                  | _____                         |                             |
|   |                  | _____                         |                             |
|   |                  | _____                         |                             |
|   |                  | _____                         |                             |

| Major Steps Performed   | Information for Steps  |
|---|--|
| <ol style="list-style-type: none"> <li>Each day, find the appointments in the Appointment file for the day two weeks ahead.</li> <li>Prepare and mail appointment notification card to all patients having appointments.</li> </ol> | <p>Current date</p> <p>Scheduled appointments</p><br><p>Name</p> <p>Address</p> <p>Appointment</p> <p>Appt notification card</p> |