



Australian Government

Department of Human Services

IAB401: Assignment Part B (2023)

Tutorial Time: Tuesday 11am-1pm

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Task (ii)	20	20	20	20	20

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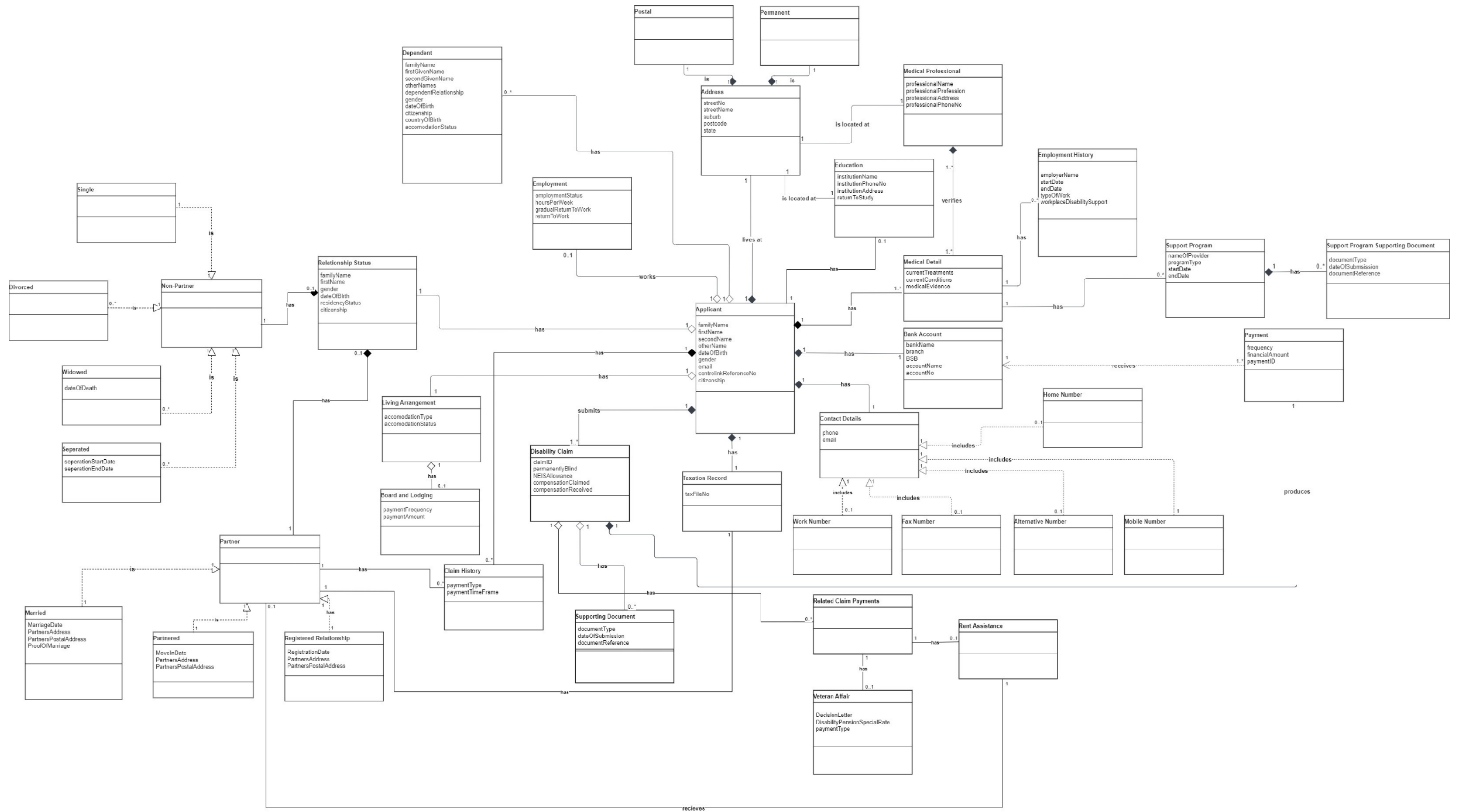
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UML Class Diagram

The following UML Class Diagram is in relation to the Disability Support Pension Claim Form which is used in claim processing in the claim management system. Assumptions made in the creation of this model are listed below.

Assumptions:

- If an applicant is making a claim, they will have a TFN.
- Since the applicant is applying for a disability support pension, it is assumed an applicant will have medical details.
 - Therefore, Medical Details class has a composition relationship with the Applicant class.
 - Moreover, Disability Claim class has a composition relationship with the Applicant class.
- Employment History class is associated with Medical Detail class as it is requested in the medical section of the claim form.
- The relationship between medical detail and medical professional is a composition, as you would not provide the medical professional if you did not have medical details.
- There is an association relationship between Support Program and Medical Details because the DHS does not only want you to list programs that are relation to injury and medical conditions/treatments.
- While a bank account can technically exist independently, each applicant has their own specific account that they frequently use. Hence, if said applicant did not exist, they would not possess a bank account. For this reason, this represents a composition relationship.
- Similarly, a taxation record (containing a unique TFN) cannot exist on its own if the applicant does not exist. Thus, this also illustrates a composition relationship.



Software Architecture Modelling

The four software application components identified are in relation to the UML Class Diagram data and the main processes and services identified in the business capability map, value streams and ArchiMate model created in the first assessment. A breakdown is provided below:

Software Application Components

Part A Processes and Services

- 1) Applicant Component
- 2) Claim Component

Part B UML Class Diagram

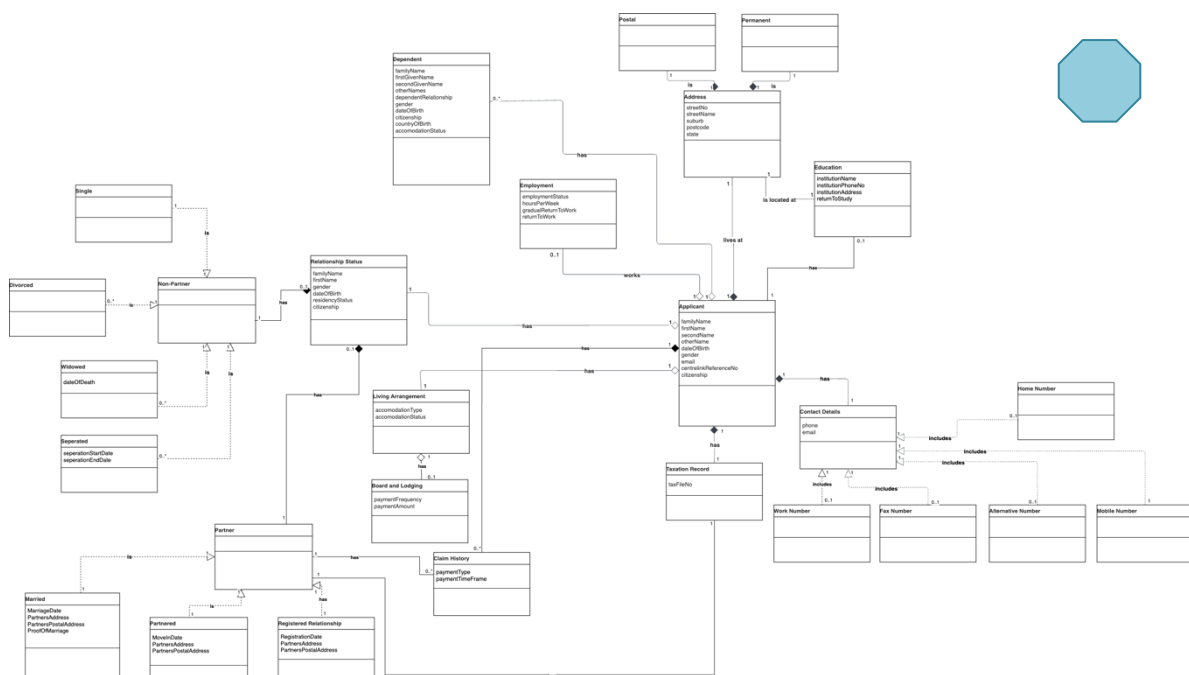
- 3) Medical Component
- 4) Payment Component

Applicant Component

The Applicant has been identified as one of the key software application components within the scenario. In essence, it oversees the verification and management of personal information for each applicant. Thus, it captures several attributes comprising of an applicant's gender, date of birth, name(s), address, education, Centrelink reference number (CRN), email, and citizenship. Throughout the claim process, the applicant's involvement is vital. They are the one who lodges the application by providing the Department of Human Services (DHS) with their personal information. Doing so, it enables DHS employees/stakeholders to determine the applicant's eligibility and entitlement for the Disability Support Pension (DSP). Thus, the foundation for claim procedure involves an applicant providing their personal identifying attributes, as well as external information such as their taxation record, bank details, educational background, employment history, and medical information. Through this, such external information been identified as distinct classes.

The UML Class Diagram and the processes that were determined during the first assignment both heavily involve the applicant. As the applicant is the initiator of the process, the classes that were developed have an aggregate or composition connection. This means that if the applicant never submits a claim form, there would be no claim to address, thereby establishing a composition relationship. However, in the case of 'employment,' it represents an aggregation relationship, since the employment class can exist independently, even without the applicant. Additionally, information about the applicant's partner status is required, as this has an influence on the applicant's entitlement. In relation to other software components, the applicant primarily interacts with the **claim** component, where claims to be assessed and verified. Moreover, the **medical** and **payment** components will also be interacting to the applicant. Through their interactions, they ensure the accuracy of the applicant's external details/records.

This integration of the applicant into the system not only complies with the architectural specifications but also demonstrates how different components are coordinated to enable smooth service delivery. Overall, the applicant component plays the pivotal role, initiating a procedure that depends on the data they provide, which allows DSP to offer the support that is required.

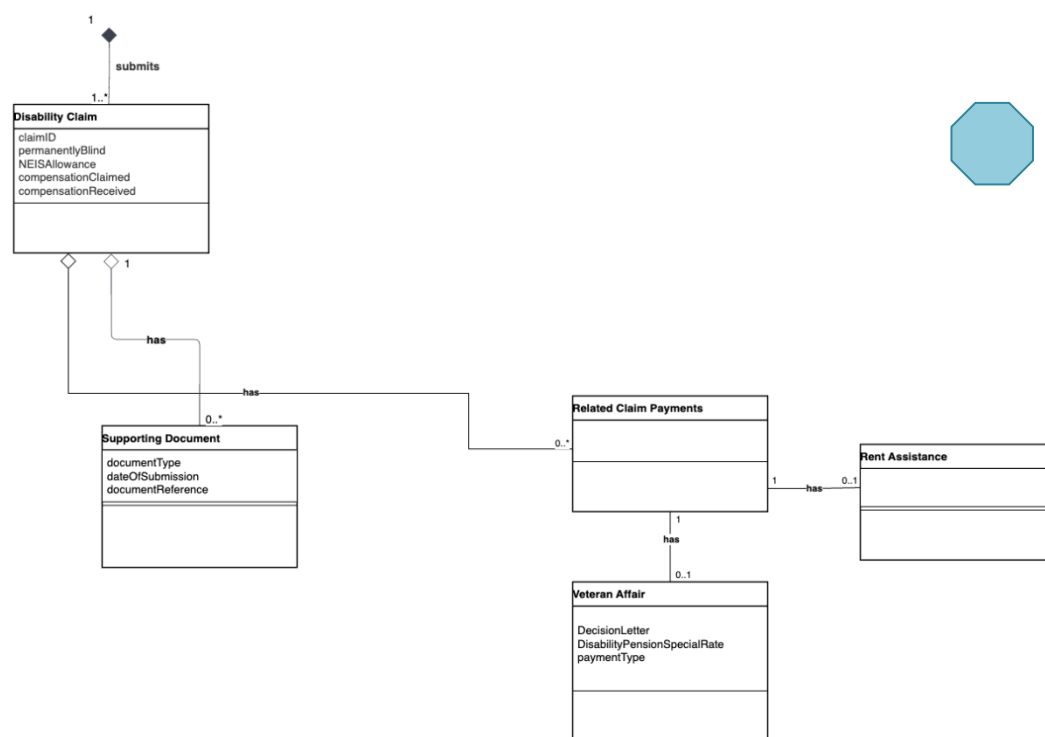


Claim Component

The Claim component stands as a foundational pillar within the system, serving as the core element for processing disability support claims. It contains crucial details that are essential for evaluating an applicant's eligibility and entitlement for the Disability Support Pension (DSP). Its attributes encompass the claim ID, disability status, and information related to any claimed or received compensation. Through this component, it records, manages, and organises the vital particulars of each disability claim. Its primary function is to facilitate the assessment of an applicant's eligibility, ensuring that accurate support is allocated based on their specific circumstances.

Interactions with other software components are paramount to the success of the claim processing system. The claim component interacts with the **applicant** component, where applicant information is verified and cross-referenced to the claim data. This integration ensures that the applicant's details align with the information in the claim, enhancing the overall accuracy of the process. Furthermore, the supporting document class collaborates closely with the claim component, as supporting documents play a pivotal role in substantiating the claims made by applicants. These documents include essential paperwork such as medical records or certificates, which are required to validate the claims. The inclusion of the Supporting Document component is vital for verifying the accuracy and legitimacy of the claims. The related claim payment class is another crucial player within the system, handling payment-related information associated with disability claims. It encompasses details regarding payments or compensation disbursed to claimants, serving as the financial support of the claim process. This component takes charge of managing and tracking all financial transactions linked to disability claims, ensuring that eligible applicants receive the support they are entitled to.

Overall, the claim component plays a key role disability support claim process, being responsible for collecting, organising, and evaluating all relevant claim information. Its interactions with other software components ensure the seamless flow of data and enhance the overall accuracy of the claim assessment process. This enabled DHS to provide immediate support to individuals with disabilities while upholding the integrity of the claims system.



Medical Component

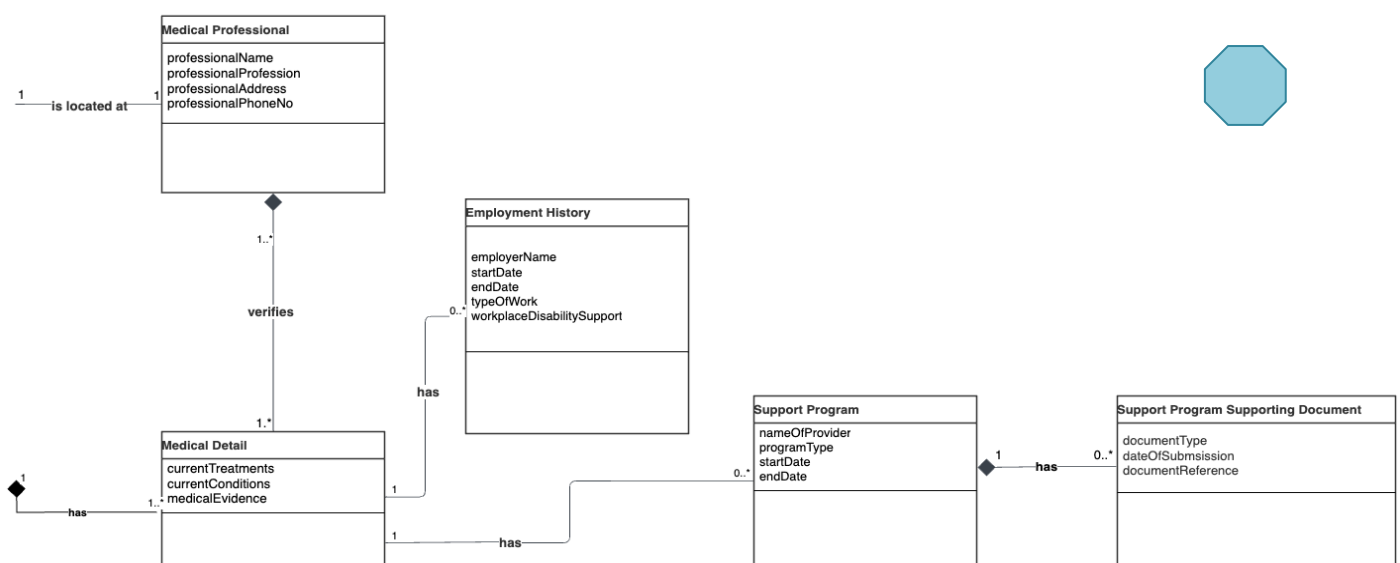
Medical is another main application component relating to the data model and the DHS management processes. To be eligible for DSP, applicants must be permanently blind or have a condition (physical, intellectual, or psychiatric) that prevents them from working or being retrained for work. As such, the medical component manages the eligibility of claims in relation to applicants' medical conditions, treatment, and relating work arrangements. This is evidenced with this component covering medical detail, medical professional, employment history, support programs, and the supporting documentation for support programs.

In managing the eligibility of claims, this component interacts with the **Application**, **Claim** and **Payment** components identified. They type of payment (e.g., rent assistance etc.), the amount received (Payment Component), and the support allocated to applicants (Claim Component) is influenced by the medical information provided by the applicant (Applicant Component).

In assessing claim eligibility, claim assessors will review the medical details provided by applicants. If applicants did not provide any medical information, then they would not be successful in their claim which is why it is such a key software application component in the overall DHS process.

Assumptions:

- Employment history is connected to the medical details class, as it is included in the medical section of the form.
- The relationship between medical detail and medical professional is a composition, as you would not provide the medical professional if you did not have medical details.
- There is an association relationship between Support Program and Medical Details because the DHS does not only want you to list programs that are relation to injury and medical conditions/treatments.
- Since applicant are applying for medical pension, it is assumed an applicant will have medical details. Thus, the relationship is a composition relationship.



Payment Component

Payment has been identified as one of the main software components for the Disability Support Pension claim process. It allows applicants to be successfully paid for the relevant disability claim using their corresponding bank account details. The payment class contains three attributes, specifically: frequency, financial amount, and payment ID. Frequency refers to the frequency of the payment, whereas financial amount is the payment amount the claimant is or will be receiving, and lastly, the payment ID is the unique identifier of the payment.

The bank account class is the most important class that payment interacts with, as an applicant must provide these details in order to be paid for their disability claim. It contains the attributes: bank name, branch, BSB, account name, and account number. An applicant can only have one set of bank account information in which a payment can be made to simplify the claim process. However, an applicant can have one or more payments being sent to their bank account. Thus, the relationship between bank account and payment is one to many.

The payment class has a dependant relationship with the bank account class, where payment depends on an applicant's bank account details to receive the claim. Furthermore, the relationship between bank account and application is a composition relationship, as a bank account is a part of an applicant if they're attempting to submit a claim. Without an applicant, their associated bank account would not exist in this UML diagram.

