Based on the given security case pattern description and information about the Instant Messaging (IM) software, we will follow the outlined assurance case predicates to construct a security case. The following tree structure represents the hierarchical layout of this assurance case.

```

- Goal (G1, Instant Messaging (IM) software is acceptably secure in its operational environment)

- Context (C1, Definition and description of Instant Messaging (IM) software)

- Context (C2, Definition and description of the operational environment)

- Context (C3, Definition of acceptably secure as ensuring protection against unauthorized access and data breaches)

- Justification (J1, Protection of software assets supports that software is acceptably secure)

- Strategy (S1, Argument that software assets are under protection)

- Goal (G2, All identified software critical assets are protected)

- Context (C4, List of Instant Messaging (IM) software critical assets: Registration information, Registration process, User account information, Authentication information, Login process, Chat logs)

- Justification (J2, Relationship between assets is clear and can be argued separately)

- Strategy (S2, Respective arguments of software critical assets)

- Goal (G3, Each software critical asset is protected)

- Context (C5, List of software critical asset types in PEDD: Process, Environment Entity, Data Exchange, Data Storage)

- Justification (J3, Types of software assets according to PEDD)

- Strategy (S3, Argument of the type to which the software critical asset belongs)

```

We apply multiple instances of Goal G3 and G4 corresponding to various types of assets and their safeguards, as specified by HasMultiplicity. Here we illustrate with one specific example and placeholders for the others:

```

- Goal (G4, Registration information, which is a Data Exchange asset type, is protected)

```

This pattern can be repeated for each of the critical assets listed in the context (C4) and their types detailed in (C5). This structured hierarchical representation allows for ease of understanding and demonstrating how each component and sub-goal contribute to the overall security of the IM software.