

OBJECT ORIENTED ANALYSIS AND DESIGN PROJECT

ARMS AND AMMUNITION CONTROL SYSTEM

ACTIVITY DIAGRAM DOCUMENTATION

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Following the state chart diagrams, this documentation presents the behavioral diagram which describe the dynamic aspects of the system and the flow between activities.

The parts of our system that we chose to construct state diagrams are:

- Applying licence Placing orders
- Placing orders
- Reselling guns/transfer of weapons
- Taking part in competitions

The basic activity diagram notations are:

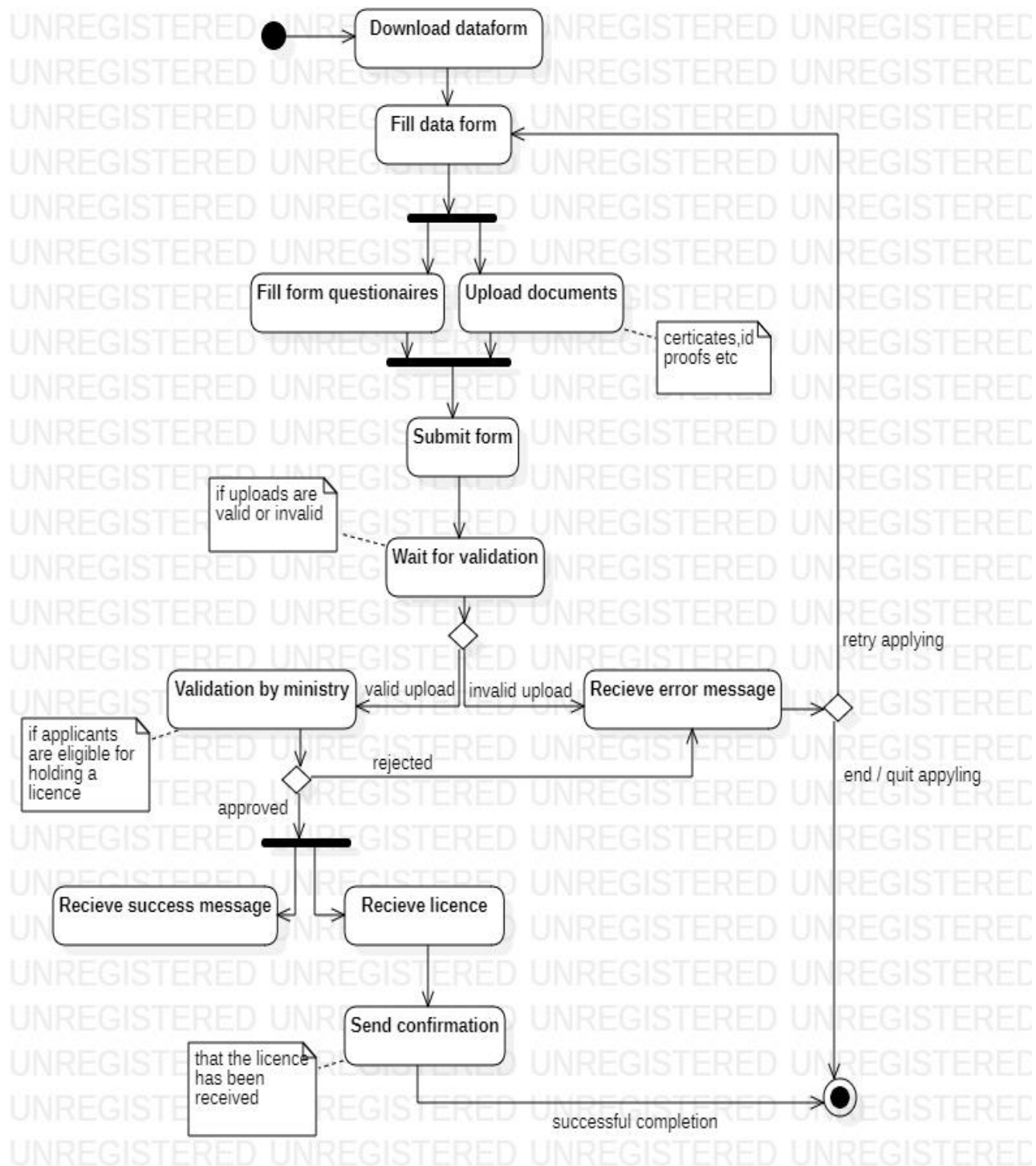
- The initial state is followed by the activities that represents execution of an action or object.
- The events that trigger the transition are labelled above the arrows between the transitions from one activity to another.
- The choice pseudostate indicates the dynamic condition with branched potential results, maybe based on the functions of the previous activities.
- The activities that mention getting rejected or failing a request can terminate, indicating that it cannot proceed further
- The fork pseudostate is used when two activities are executed concurrently
- The join pseudostate merges several transitions ie converging concurrent activities into one

Activity diagrams and brief description:

- **Applying licence:**

Here the activities involved in applying for a licence are being constructed in a activity diagram. The applicants download the licence application data form from the source and fill the data form with the required data and documents, proofs or certificate copies, as requested in the form. Once filled, the applicant can submit the form, and in case of empty spaces, invalid file type or size etc, the upload will become invalid and hence receive an error message which the user can respond by either uploading the form again with properly filled data or end applying. In case of no upload errors, the dataforms are sent to the administrator ie, admin for validation of the dataforms. In case of approval, applicant receives a positive message and licence and thus confirm it leading it to a successful

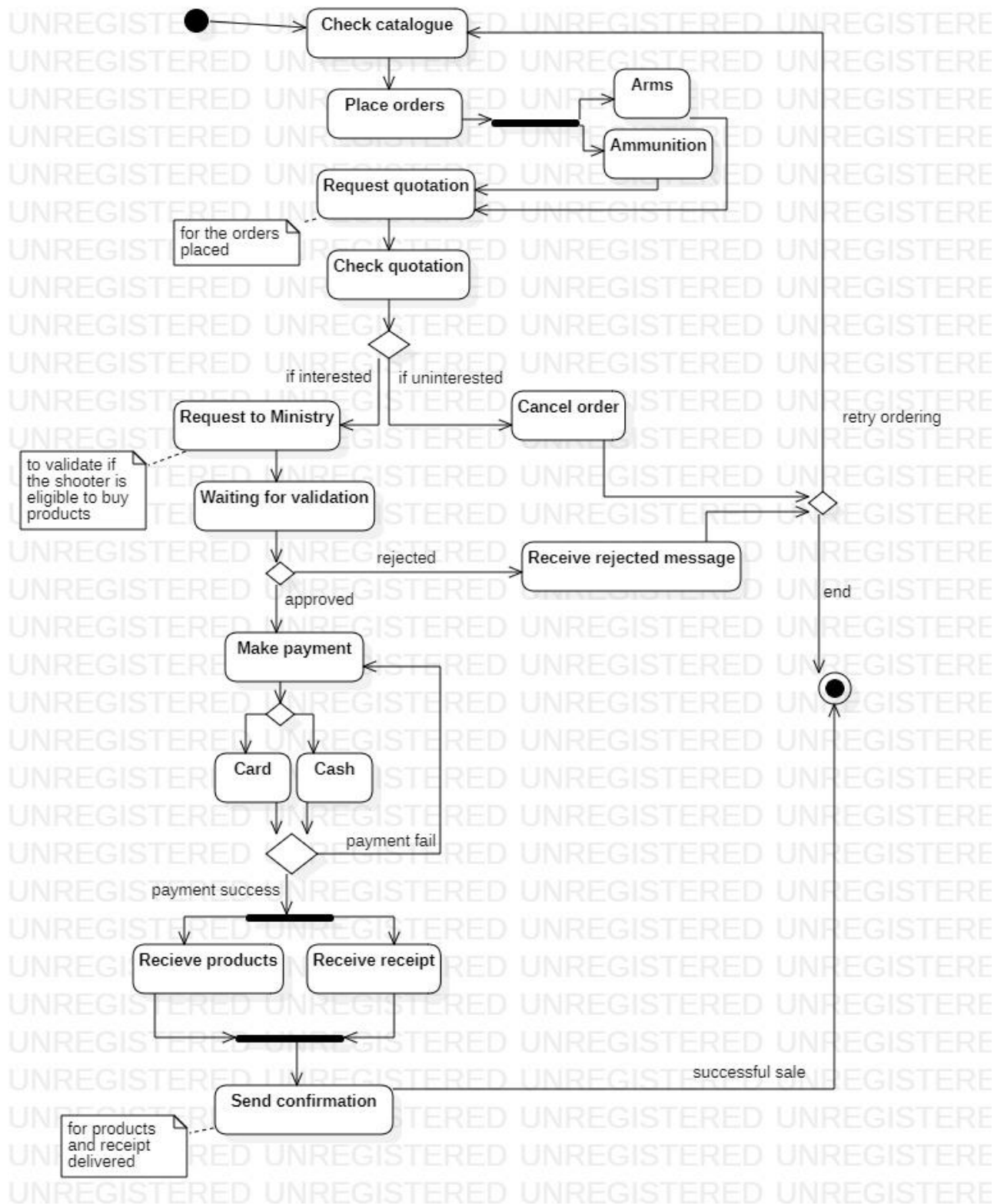
completion. In case of rejected application, the applicant can either try applying again or quit.



- **Placing orders:**

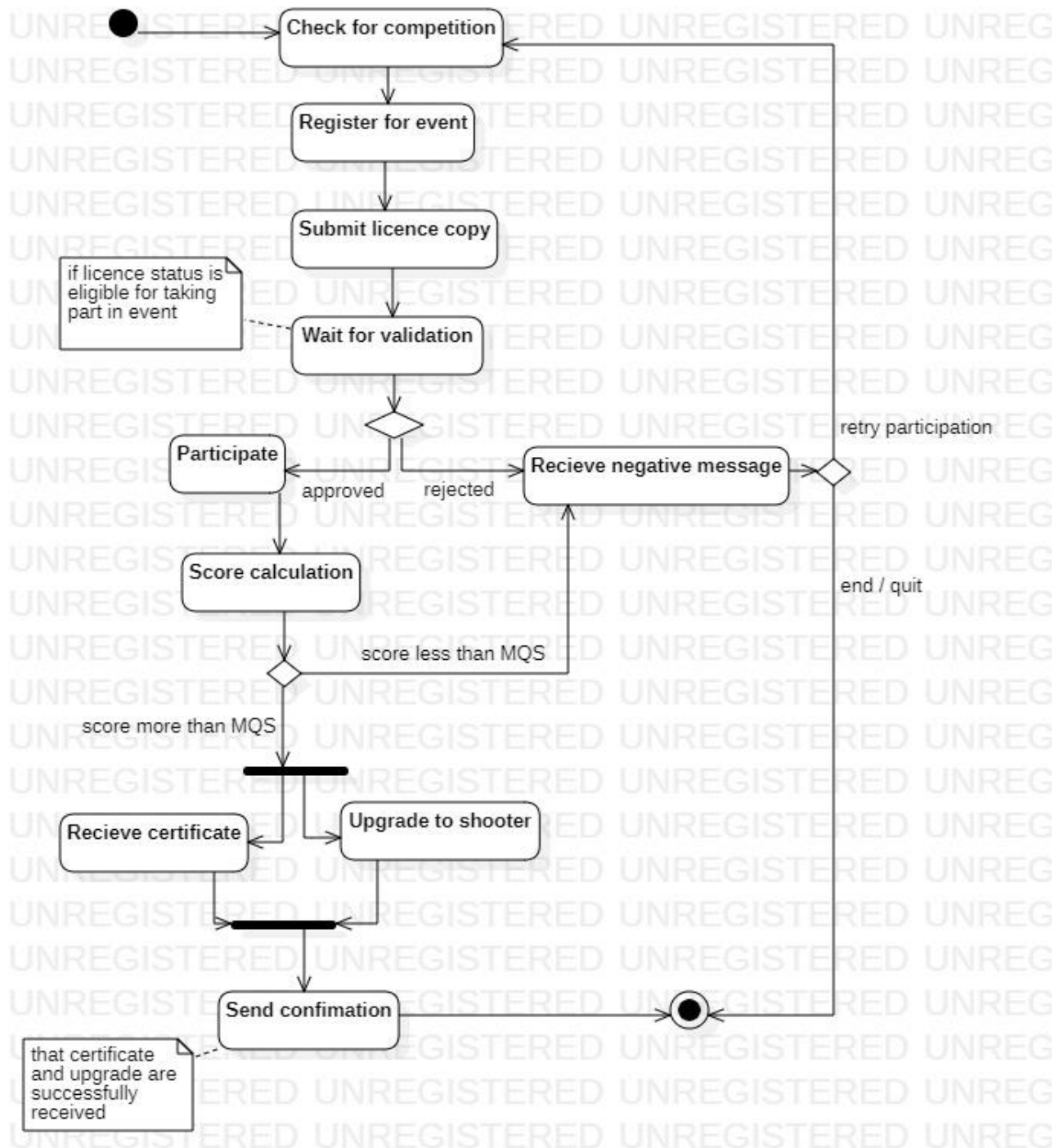
The buyer can request and check the catalogue to place arm and ammunition orders, and can request and receive quotation of the orders placed. And the validation of

ministry occurs again as in the earlier diagrams and if approved, they can proceed to pay by card or cash and then receive and confirm products and receipts. In case of negative responses, the user can either retry by starting over or ending process.



- **Taking part in competitions:**

Here, the user can check for competitions held by NRAI and register for the events. One has to submit his licence copy and get approval from the event management to take part in the event. In case of rejection, they receive a negative message and can either quit or retry. The approved ones can participate, score, and if score is more or equal to Minimum Qualification Score, then they will receive a certificate and upgrade to shooter, if they aren't already one that they send confirmation on receiving. In case of low score, they receive negative message which further has the above mentioned choices.



- **Reselling gun/weapon transfer:**

Here the civilian licence holders check for ads to learn about ongoing sales, place orders for arms and ammunition and receive quotation, and if interested, request ministry for approval, make payment and get products transferred and similarly the rejected/negative cases can either end process or retry.

