



**L-Università ta' Malta**  
**Faculty of Information &  
Communication Technology**

## Assignment Report

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May 29, 2020

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# **1 Introduction**

## **1.1 Note on the code**

This assignment is implemented in c++. Readability was prioritized over efficiency since the code needs to be easily understood by others.

# **2 Part 1**

## **2.1 How the problem was tackled**

### **2.1.1 Structures**

First off, the needed structures were created: 'variable' in an enumerated type containing the possible variables. An 'invalid' variable was also created whose use is for error catching purposes. Following that, a structure 'literal\_t'. This structure is composed of a variable and boolean to show whether the variable is negated or not.

Then a clause was defined as a vector of literals. Similarly, a formula was defined as a vector of clauses.

Apart from those, 'expression\_t' was also defined as an array of alphabet. Alphabet being an enumeration containing the possible alphabet characters received as input.

These structures are defined in 'sat.h'.

### **2.1.2 Parsing**

# **3 Part 2**