

## ABSTRACT

Bar Code is group of words that used to presents the message in one product to the tools (usually called optic scanner), after that processed in computer and finally results the message that has been translated. The types of bar code are bar code Codabar, bar code 2/5, bar code 2/5 interval, bar code 3/9, bar code 93, bar code 128 UCC/EAN 128, bar code EAN 8/13, PostNet, and UPC – A UPC – E bar code. The method that used to read bar code is Arithmetic Modular Equality Method :

$$(a_1, a_2, a_3, \dots, a_n)(w_1, w_2, w_3, \dots, w_n) = a \text{ mod } n$$

The function of this method is to identify single error in form  $(a_1, a_2, a_3, \dots, a_n)(w_1, w_2, w_3, \dots, w_n) = a \text{ mod } n$ , where  $0 < a_i \leq n$  can be identified if and only if  $w_i$  relatively prime to  $n$  and error of digit arrangement that closely related in form  $\dots a_i a_{i+1} \dots a_j a_{j+1} \dots \rightarrow \dots a_j a_{i+1} \dots a_i a_{j+1} \dots$  identified if and only if  $w_i = w_j$  relatively prime to  $n$ .

