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## PREFACE

Editor of the Journal of PILAR Nusa Mandiri (PILAR), said praise and gratitude to the presence of Allah S.W.T, creator of the universe who mastered knowledge as wide as the heavens and the earth, for the abundance of grace and gifts that have been given to PILAR editors to publish **PILAR Vol. 16, No. 1, March 2020**. PILAR has the status of an Accredited National Journal accredited by the Indonesian Ministry of Research and Higher Education at the **SINTA S3** level, in accordance with the Decree of Strengthening Research and Development Decree Number 21 / E / KPT / 2018, which has been in effect since July 9, 2018, for 5 years which is used by lecturers, researches, and professionals as a medium or media to publish publications on the findings of research conducted in each semester.

PILAR is published 1 (one) year for 2 (two) times at the beginning of each semester, PILAR editors receive scientific articles from the results of research, reports/case studies, information technology studies, and information systems, which are oriented to the latest in science and information technology in order to be a source of scientific information that is able to contribute to the increasingly complex development of information technology.

The editor invited fellow researchers, scientists from various higher education institutions to make scientific contributions, both in the form of research results and scientific studies in the field of computer science, computer technology, information technology. The editorially hopes for input from readers or related to scientific periodicals, in order to further improve the quality of the journal as we all hope.

The editor hopes that the scientific articles contained in the scientific journal PILAR will be useful for academics and professionals working in the world of management, education, and information technology.

Chief Editor



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