

## DECOMPOSITION OF GENERALIZED BOOK GRAPHS

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**Abstract:** For the finite graph  $G = (V, E)$ . A book graph  $B_n$  taken as follows.  $V(B_n) = \{u_1, u_2\} \cup \{v_i, w_i / 1 \leq i \leq n\}$  and  $E(B_n) = \{e_1 = u_1u_2\} \cup \{e'_j = u_1v_j, e''_j = u_2w_j, e'''_j = v_jw_j / 1 \leq j \leq n\}$ . We consider the generalized book graph  $B_{n,m}$  with vertex and edge sets by  $V(B_{n,m}) = \{u_i / 1 \leq i \leq m-2\} \cup \{v_i, w_i / 1 \leq i \leq n\}$  and  $E(B_{n,m}) = \{e_i = u_iu_{i+1} / 1 \leq i \leq m-3\} \cup \{e'_j = u_1v_j, e''_j = u_{m-2}w_j, e'''_j = v_jw_j / 1 \leq j \leq n\}$ . This report investigates the decomposition of book graph  $B_n$  and generalized book graph  $B_{n,m}$ .

**Keywords and Phrases:** Generalized book graph, Book graph, Decomposition, stars, cycles, paths.

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