Let $Q_n = (V_b \cup V_w, E)$ be the $n$-dimensional hypercube. Let $F_a$ be the set of faulty vertex pairs. Let $s_1, t^2_1, ..., t^{k_1}_1 \in V_b, t^1_1 \in V_w$. In this thesis, we construct the spanning internally disjoint paths $P(s_1, t^i_1)$ of $Q_n - F_a$ for $f_a + k \leq n$ and $1 \leq i \leq k$.

Let $s_1, t^1_2, t^2_1, ..., t^{k_1}_1 \in V_b, s_2, t^1_1, t^2_2, ..., t^{k_1}_2 \in V_w$ be arbitrary fault-free vertices of $Q_n$. In this thesis, we construct the spanning internally disjoint paths $P(s_1, t^i_1)$ and $P(s_2, t^j_2)$ of $Q_n - F_a$ for $f_a + k_1 + k_2 \leq n-1$ and $1 \leq i \leq k_1, 1 \leq j \leq k_2$.

Keywords: hypercube, vertices fault-tolerance, Fanability, Hamiltonian-laceable, Bifanability
REFERENCES


