

## DAFTAR ISI

ABSTRAK .....	<b>Error! Bookmark not defined.</b>
ABSTRACT .....	<b>Error! Bookmark not defined.</b>
KATA PENGANTAR .....	<b>Error! Bookmark not defined.</b>
DAFTAR ISI .....	1
DAFTAR TABEL .....	<b>Error! Bookmark not defined.</b>
DAFTAR GAMBAR .....	<b>Error! Bookmark not defined.</b>
BAB I PENDAHULUAN .....	<b>Error! Bookmark not defined.</b>
1.1 Latar Belakang .....	<b>Error! Bookmark not defined.</b>
1.2 Rumusan Masalah .....	<b>Error! Bookmark not defined.</b>
1.3 Tujuan .....	<b>Error! Bookmark not defined.</b>
1.4 Batasan Masalah .....	<b>Error! Bookmark not defined.</b>
1.5 Metodologi .....	<b>Error! Bookmark not defined.</b>
1.6 Sistematika Penulisan .....	<b>Error! Bookmark not defined.</b>
BAB II KAJIAN PUSTAKA .....	<b>Error! Bookmark not defined.</b>
2.1 Persamaan Aliran fluida .....	<b>Error! Bookmark not defined.</b>
2.1.1 Persamaan Bernouli .....	<b>Error! Bookmark not defined.</b>
2.1.2 Kehilangan Energi dan Penambahan Energi Pada Sistem.....	<b>Error!</b>
<b>Bookmark not defined.</b>	
2.1.3 Kehilangan Energi Karena Gesekan .....	<b>Error! Bookmark not defined.</b>
2.1.4 Persamaan Hazen William.....	<b>Error! Bookmark not defined.</b>
2.2 Metode Firefly Algorithm (FA) .....	<b>Error! Bookmark not defined.</b>
2.2.1 Keatraktifan Firefly.....	<b>Error! Bookmark not defined.</b>

2.2.2 Jarak Antara Firefly .....	<b>Error! Bookmark not defined.</b>
2.2.3 Pergerakan Firefly.....	<b>Error! Bookmark not defined.</b>
<b>BAB III METODOLOGI PENELITIAN.....</b>	<b>Error! Bookmark not defined.</b>
3.1 Desain Penelitian .....	<b>Error! Bookmark not defined.</b>
3.2 Metode Penelitian.....	<b>Error! Bookmark not defined.</b>
3.2.1 Metode Pengumpulan Data.....	<b>Error! Bookmark not defined.</b>
3.2.2 Metode Pengembangan Perangkat Lunak.....	<b>Error! Bookmark not defined.</b>
3.3 Alat dan Bahan Penelitian .....	<b>Error! Bookmark not defined.</b>
3.3.1 Alat.....	<b>Error! Bookmark not defined.</b>
3.3.2 Bahan .....	<b>Error! Bookmark not defined.</b>
<b>BAB IV HASIL PENELITIAN DAN PEMBAHASAN.....</b>	<b>Error! Bookmark not defined.</b>
4.1 Pengembangan Sistem Model .....	<b>Error! Bookmark not defined.</b>
4.1.1 Model Jaringan Pipa Distribusi Air .....	<b>Error! Bookmark not defined.</b>
4.1.2 Penyelesaian Model Menggunakan Firefly Algorithm.....	<b>Error! Bookmark not defined.</b>
4.1.3 Pseudocode Firefly Algorithm Untuk Menentukan Distribusi Tekanan Pada Jaringan Pipa Air.....	<b>Error! Bookmark not defined.</b>
4.2 Analisis Perangkat Lunak.....	<b>Error! Bookmark not defined.</b>
4.2.1 Tahapan Umum Perangkat Lunak .....	<b>Error! Bookmark not defined.</b>
4.2.2 Pemodelan Kebutuhan .....	<b>Error! Bookmark not defined.</b>
4.2.3 Implementasi.....	<b>Error! Bookmark not defined.</b>

4.2.4 Pengujian .....	<b>Error! Bookmark not defined.</b>
4.3 Studi Kasus Dan Hasil Penelitian.....	<b>Error! Bookmark not defined.</b>
4.3.1 Studi Kasus ( <i>Hanoi Network</i> ).....	<b>Error! Bookmark not defined.</b>
4.3.2 Masukan Data .....	<b>Error! Bookmark not defined.</b>
4.3.3 Sistem Persamaan .....	<b>Error! Bookmark not defined.</b>
4.3.4 Hasil Penelitian.....	<b>Error! Bookmark not defined.</b>
BAB V KESIMPULAN DAN SARAN.....	<b>Error! Bookmark not defined.</b>
5.1 Kesimpulan.....	<b>Error! Bookmark not defined.</b>
5.2 Saran.....	<b>Error! Bookmark not defined.</b>
DAFTAR PUSTAKA .....	<b>Error! Bookmark not defined.</b>
LAMPIRAN.....	<b>Error! Bookmark not defined.</b>

