Project plan

1. **Purpose and objectives**

This project aims to design and implement a simple , elegant and efficient flash file system (AshFS) providing also a testbench module (TASH) for evaluating AshFS's performance.

2. **Useful resources , technologies and other specifications**

Practical File Systems Design with the Be File System, D. Giampaolo
cs.pub.ro/~pso, Labs 9 and 10 , drivers for files systems
*en.wikipedia.org/wiki/JFFS,*Journaling Flash File System
en.wikipedia.org/wiki/Flash_memory, Flash Memory

Kernel version used is 2.6.27.3.

3. Project phases description
3.1. *Ash File System*
3.1.1 Ash FS design (1 week – 12 Nov, Daniel B. and Gabriel S.)
3.1.2 Ash FS implementation (1 week - 26 Nov, Daniel B.)
3.1.3 Testing (2 days - 29 Nov, Daniel B.)
3.1.4 Code Review (2 days - 17 Dec, Gabriel S.)

3.2 *Flash Translation Layer*
3.2.1. Design block dispatching algorithm (3 days - 19 Nov, Gabriel S.)
3.2.2 Wear Leveller design (3 days - 19 Nov, Daniel B.)
3.2.3 Garbage Collector design (3 days - 26 Nov - Daniel B.)
3.2.4 Error Fixer , design and implementation (1 week - 26 Nov,Gabriel S.)
3.2.5 Block Manager , implementation (4 days - 3 Dec, Gabriel S.)
3.2.6 Compression System, design and implementation (1 week - 10 Dec, Daniel B.)
3.2.7 Security System, design and implementation (1 week - 10 Dec, Daniel B.)
3.2.8 Testing (2 weeks - 17 Dec, Gabriel S. and Daniel B.)
3.2.9 Code Review (2 days - 19 Dec, Gabriel S.)

3.3 Testbench module
3.3.1 Test bench implementation (4 days - 3 Dec, Gabriel S.)
3.3.2 Testing (3 days - 10 Dec, Daniel B.)
3.3.3 Code Review (2 zile - 17 Dec, Daniel B.)

3.4 Testing
3.4.1 Test creation (4 days - 17 Dec, Daniel B. and Gabriel S.)
3.4.2 Result analysis (2 days- 24 Dec, Daniel B. and Gabriel S.)

3.5 Documenation
3.5.1 Setting up wiki (1 day - 12 Nov, Daniel B. and Gabriel S.)
3.5.2 Adding documentation for FFS module (1 day - 13 Nov, Daniel B.)
3.5.3 Adding documentation for BM module (1 day - 20 Nov, Daniel B.)
3.5.4 Adding documentation for Wear Leveler (1 day - 20 Nov, Daniel B.)
3.5.5 Adding documentation for Garbage Collector (1 day - 27 Nov, Gabriel S.)
3.5.6 Adding documentation for Error Fixer   (1 day - 27 Nov, Gabriel S.)
3.5.7 Wiki review (3 days - 10 Dec, Gabriel S.)

3.6. Paper
3.6.1 Results. Start writing paper: abstract , organization , references (3 days - 17 Dec, Daniel B. and Gabriel S.)
3.6.2 Paper review (3 days - 7 Jan, Daniel B. and Gabriel S.)
3.6.3 Paper finalization (3 days - 17 Jan, Daniel B. and Gabriel S.)

For a clear picture of the schedule, please consult the Gantt diagram in the Anex section.

ID	Task Name	Start	Finish	Duration
1	3.1.1 Ash FS design	06.11.2008	12.11.2008	1w
2	3.1.2 Ash FS Implementation	20.11.2008	26.11.2008	1w
3	3.1.3 Testing	28.11.2008	29.11.2008	2d
4	3.1.4 Code Review	16.12.2008	17.12.2008	2d
5	3.2.1 Design Block Dispatching Algorithm	17.11.2008	19.11.2008	3d
6	3.2.2 Wear Leveller Design	17.11.2008	19.11.2008	3d
7	3.2.3 Garbage Collector Design	24.11.2008	26.11.2008	3d
8	3.2.4 Error Fixer, Design and Implementation	20.11.2008	26.11.2008	1w
9	3.2.5 Block Manager Implementation	30.11.2008	03.12.2008	4d
10	3.2.6 Compression System, Design and Implementation	04.12.2008	10.12.2008	1w
11	3.2.7 Security System, Design and Implementation	04.12.2008	10.12.2008	1w
12	3.2.8 Testing	04.12.2008	17.12.2008	2w
13	3.2.9 Code Review	18.12.2008	19.12.2008	2d
14	3.3.1 Test Bench Implementation	30.11.2008	03.12.2008	4d
15	3.3.2 Testing	08.12.2008	10.12.2008	3d
16	3.3.3 Code Review	16.12.2008	17.12.2008	2d
17	3.4.1 Test Creation	14.12.2008	17.12.2008	4d
18	3.4.2 Result Analysis	23.12.2008	24.12.2008	2d
19	3.5.1 Setting Up Wiki	12.11.2008	12.11.2008	1d
20	3.5.2 Adding Documentation for FFS Module	13.11.2008	13.11.2008	1d
21	3.5.3 Adding Documentation for BM Module	20.11.2008	20.11.2008	1d
22	3.5.4 Adding Documentation for Wear Leveller	20.11.2008	20.11.2008	1d
23	3.5.5 Adding Documentation for Garbage Collector	27.11.2008	27.11.2008	1d
24	3.5.6 Adding Documentation for Error Fixer	27.11.2008	27.11.2008	1d
25	3.5.7 Wiki Review	08.12.2008	10.12.2008	3d
26	3.6.1 Results. Start Writing Paper.	15.12.2008	17.12.2008	3d
27	3.6.2 Paper Review	05.01.2009	07.01.2009	3d
28	3.6.3 Paper Finalization	15.01.2009	17.01.2009	3d

Legend

- Daniel Băluță
- Gabriel Sandu
- Shared Tasks