Panda

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What is Panda?

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What is Panda!

- Processing large data set
- Self-defined input & output format
- Semantic analysis
- Robust, Simple, Easy-to-use

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INPUT DATA

Conservative independent groups, including super PACs that can raise and spend unlimited amounts of money on election ads, dominated the advertising wars in 2010, helping Republicans make major gains in Congress, and their money has had a similar impact so far in this cycle.

"The idea that we're going to engage in an arms race on advertising with the Republicans is not appealing to many liberal donors," said David Brock, the founder of American Bridge 21st Century.

The advertising-oriented Democratic super PACs, including Priorities USA and two groups founded to back Democrats in Congress, remain on the list of organizations that the Democracy Alliance recommends to its members. Robert McKay, who is the chairman of the Democracy Alliance and sits on the board of Priorities USA, said the $100 million expected to be spent this year by alliance members would include some money for election ads, but would most likely favor grass-roots organizing and research groups.

Record Separator: "\n" Field Separator: "."

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syntactic construct

BEGIN BLOCK
- Set environment variables: RS, FS, IN_FOLDER, OUT_FILE
- Function definition
- Global variable declaration

MAIN BLOCK
- Data processing work
- Run Main block once for each data record

END BLOCK
- Execution after processing all records

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syntactic construct

```
BEGIN {
	SET IN_FOLDER = "examples/input_5/";
	hash<string, int> count;
}

MAIN {
	int i;
	for (i = 0; i< $#; i += 1){
		if (hasKey(count,${i}) == 1){
			count[${i}] += 1;
		} else {
			count[${i}] = 1;
		}
	}
}
END{
	string key;
	for (key in count){
		print(key + " : " + int2str(count[key]) + "\n");
	}
	println("Number of records processed : " + int2str(RN));
}
```

input file 1:

apple pear pineapple
grape banana orange pineapple
watermelon cucumber

input file 2:

apple pineapple banana grape
grape cucumber

output:

orange : 1
banana : 2
cucumber : 2
grape : 3
apple : 2
watermelon : 1
pineapple : 3
pear : 1
Number of records being processed : 5

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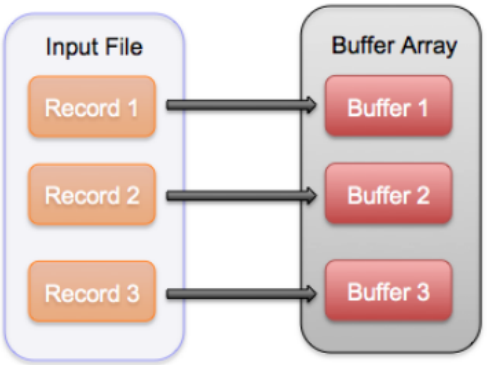
Language IO

Input

- SET IN_FOLDER = "/usr/"
- Panda will process all files in this folder

Output

- Built-in function: fWrite
- Built-in Buffer
- SET OUT_FILE = "/usr/output.txt"



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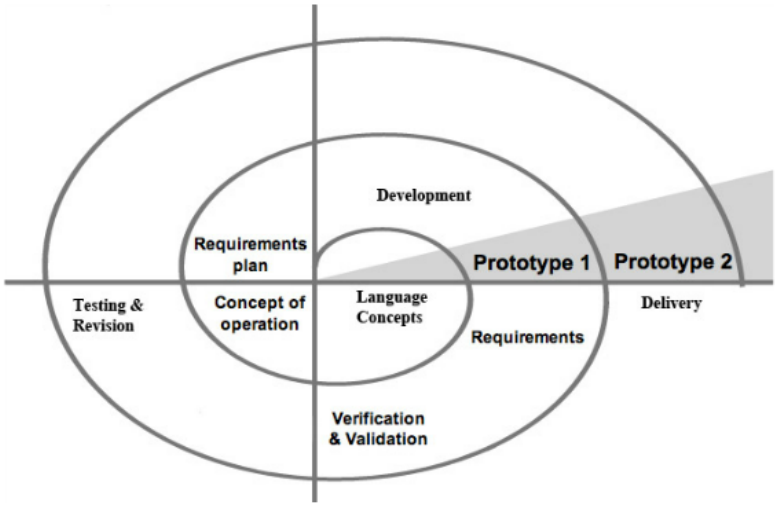
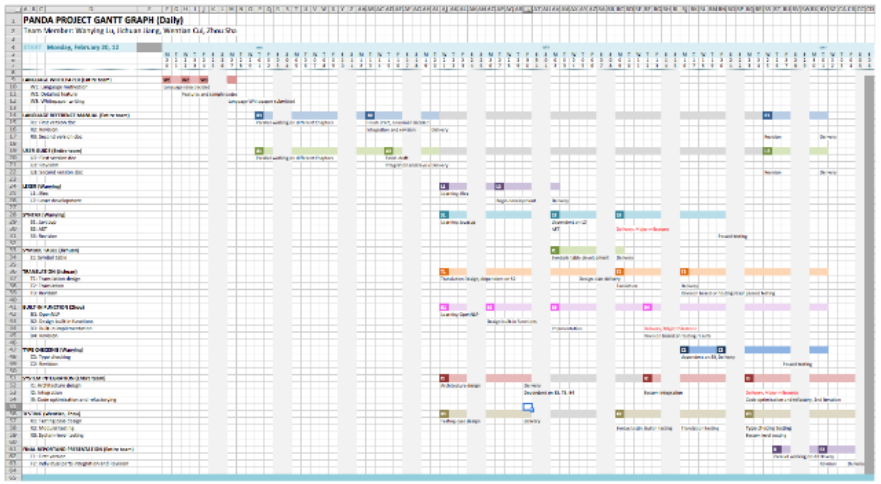
Project Management

- Software development process: Spiral model
- Version Control: Bitbucket
- Progress tracking: Gantt Graph
- Team communication: Google hangout
- File management: Dropbox, Google Drive





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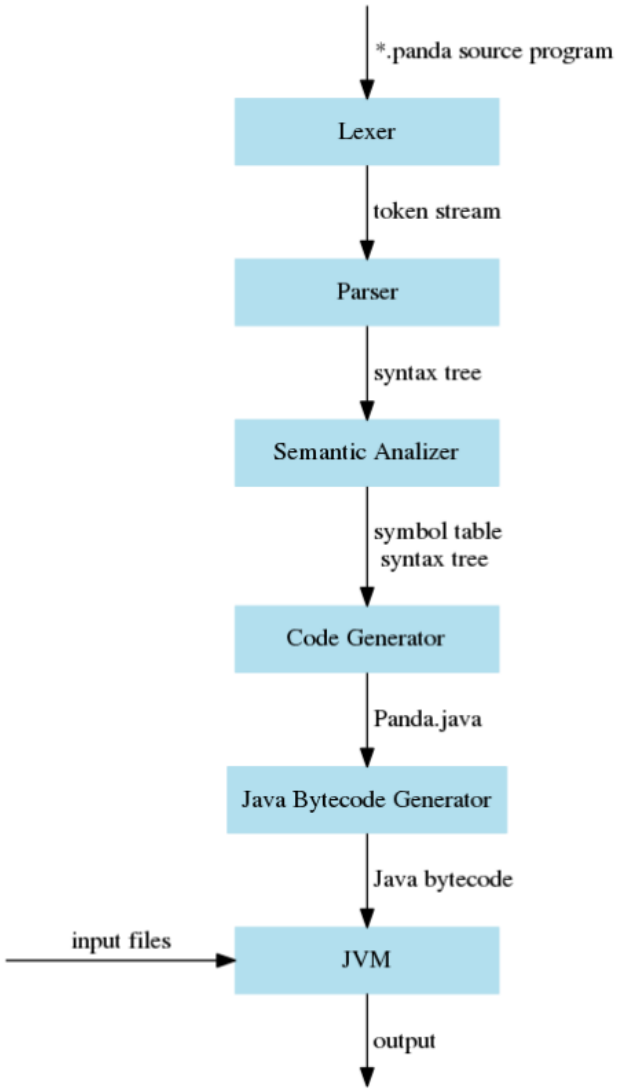
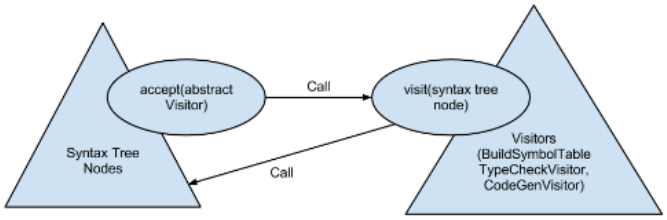
Translator architecture



Visitor Pattern



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Development Environment

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compiler-generator tools

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Testing

Black Box Testing

White Box Testing

Integration Testing

Regression Testing

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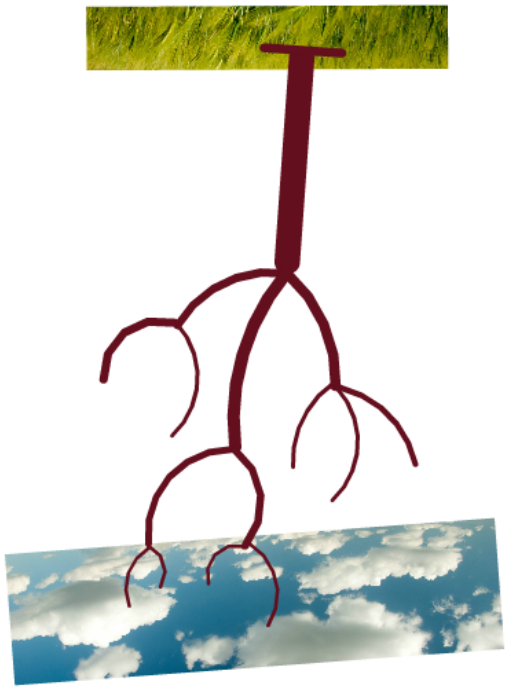
Testing

stage 1: Lexer and Parser



stage 2: symbol table and type checking

stage 3: built-in functions

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Demo

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Conclusion

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