PayLES

Program Analyzing Your LES

Mike West

CSE 598 Applied Project

Spring 2025 Session C

Arizona State University

24 February 2025

Table of Contents

Summary

PayLES is an online web application which provides military members with a fast and simple way to view their future finances according to their monthly pay document, a Leave and Earnings Statement (LES). PayLES stands for "Program analyzing your LES". It allows users to upload their LES and forecasts out what their base pay, housing allowance, taxes, and more will be for future months. Users can add more information such as future location moves, promotions, time in grade, and more. The additional information provided allows for more accurate pay forecasts.

An LES is a static document provided at the end of every month to all DoD military service members. It contains information for the month including entitlements (base pay, housing allowance, etc.), deductions (federal and state taxes, social security, automatic savings deposits, etc.), and allotments (additional duty pay). It is then summarized, showing how much the individual made over the month. This program will utilize the calculations used to project the payments of the current month and extrapolate them out to future months.

The LES is a static document which has no information about the future. By having the ability for users to see future month payments, they can better budget for their future. This information can better the lives of all service members by utilizing the information to secure their financial future.

This project is anticipated to be built as a website application. While still notional, the project is expected to be programmed in HTML, CSS, and JavaScript for the front end. If a backend database is used it will be written in SQL. The core of the program is anticipated to be written in Python, using a web framework such as Django to handle the site. The solution may be implemented on a locally run web server, or further developed to be on a commercial website provider.

Introduction

The reason for this project is to provide military members with a calculator to forecast their future income which can be tailored to their specific situation. Currently, no calculator exists which meets all the objectives I have set for this project.

Functional Objectives (prioritized):

1. Budgeting forecast out to six months in advance
2. Customizable with specific user-input values (moving, deployment, specialty pay, etc.)
3. Export ability of information
4. Importability of previously exported information
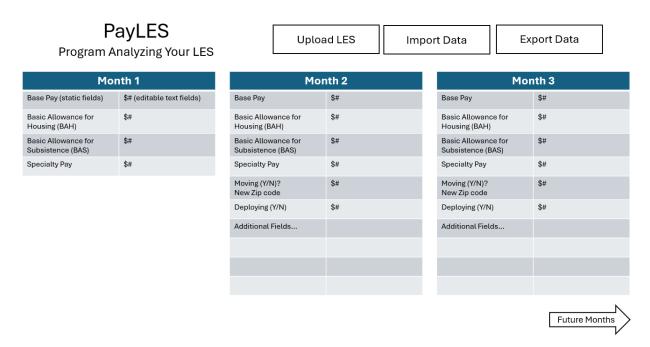
Non-Functional Objectives (prioritized):

1. Accurate budget forecasting
2. Secure application
3. Intuitive user interface
4. Simple user interface
5. Fast user interface

LES from May 2024:

DEFENSE FINANCE AND ACCOUNTING SERVICE MILITARY LEAVE AND EARNINGS STATEMENT

ID	NAME (Last, First,MI)	SOC. SEC. NO.	GRADE	PAY DATE	YRS SVC	ETS	BRANCH	ADSN/DSSN	PERIOD COVERED
	WEST MIKE		O1	220513	02	888888	AF	4047	1-31 MAY 24

ENTITLEMENTS		DEDUCTIONS		ALLOTMENTS		SUMMARY	
Type	Amount	Type	Amount	Type	Amount	+Amt Fwd	.00
A BASE PAY	3920.16	FEDERAL TAXES	305.06			+TOT ENT	5920.14
B BAS	316.98	FICA-SOC SECURITY	243.05				
C BAH	1683.00	FICA-MEDICARE	56.84			-TOT DED	3429.24
D		SGLI	4.00				
E		ROTH TSP	392.02			-TOT ALMT	.00
F		MID-MONTH-PAY	2428.27				
G						=NET AMT	2490.90
H							
I						-CR FWR	.00
J							
K						=EOM PAY	2490.90
L							
M							DIEMS / RET PLAN
N							
O							
TOTAL	5920.14		3429.24		.00	DIEMS 190830	RET PLAN BLENDE

FED TAXES	Wage Period	Wage YTD	M/S/H	Mult Jobs	Dep 17 Under	Other Dep	Add'l Tax	Other Deds	Other Income	Tax YTD
	3920.16	19224.96	S	N	00	00	.00	.00	.00	1480.18

FICA TAXES	Wage Period	Soc Wage YTD	Soc Tax YTD	Med Wage YTD	Med Tax YTD	STATE TAXES	St	Wage Period	Wage YTD	M/S	Ex	Tax YTD
	3920.16	19224.96	1191.93	19224.96	278.76		SD	.00	.00	S	01	.00

PAY DATA	BAQ Type	BAQ Depn	VHA Zip	Rent Amt	Share	Stat	JFTR	Depns	2D JFTR	BAS Type	Charity YTD	TPC	PACIDN
	SINGLE		84056	.00	1	R		0			.00		

TRADITIONAL PLAN (TSP)	Base Pay Rate	Base Pay Current	Spec Pay Rate	Spec Pay Current	Inc Pay Rate	Inc Pay Current	Bonus Pay Rate	Bonus Pay Current
	0	.00	0	.00	0	.00	0	.00

ROTH PLAN	Base Pay Rate	Base Pay Current	Spec Pay Rate	Spec Pay Current	Inc Pay Rate	Inc Pay Current	Bonus Pay Rate	Bonus Pay Current
	10	.00	0	.00	0	.00	0	.00

CONTRIBUTIONS TOTALS	YTD Deductions	YTD TSP Deferred	YTD TSP Exempt	YTD ROTH	YTD TSP AGCY-AUTO	YTD TSP AGCY-MATCH
	1922.50	.00	.00	1922.50	192.24	.00

CM AGCY CONTR	AGCY-AUTO	AGC-MATCH	LEAVE	BF Bal	Ernd	Used	Cr Bal	ETS Bal	Lv Lost	Lv Paid	Use/Lose
	39.20	.00		29.0	20.0	4	45.0	.0	.0	.0	.0

REMARKS: YTD ENTITLE 29224.86 YTD DEDUCT 4893.37

IF TSP ELECTION AMT EXCEEDS NET AMT
DUE, TSP WILL NOT BE DEDUCTED.
-MAY - AUG IS PEAK PCS SEASON CHECK YOUR LES
ENSURE YOUR ENTITLEMENTS AND PAY ARE CORRECT
FOR YOUR CURRENT DUTY STATION. CONTACT YOUR
LOCAL FINANCE OFFICE FOR QUESTIONS/UPDATES.
-MAKE SURE YOU USE YOUR BENEFIT: YOU CAN SAVE
AN AVERAGE OF 25% ON YOUR GROCERY BILL BY
SHOPPING AT THE COMMISSARY, IN-STORE AND

ONLINE AT COMMISSARY CLICK2GO! VISIT
HTTPS://CORP.COMMISSARIES.COM
MEMBER'S SGLI COVERAGE AMOUNT IS $50,000
BAH BASED ON W/O DEP, ZIP 84056
USED LEAVE BALANCE ADJUSTED.
CURRENT MONTH LEAVE BALANCE ADJUSTED.
CHARGE LEAVE 240519-240520(144)
LONGEVITY UPDATED 240512(128)
BANK AMERICAN EXPRESS

WWW.DFAS.MIL

DFAS Form 702, Jan 02

The fields from the entitlements, deductions, and allotments will be used to determine what future months will have as values.

Notional GUI:

PayLES
Program Analyzing Your LES

Upload LES **Import Data** **Export Data**

Month 1	
Base Pay (static fields)	$# (editable text fields)
Basic Allowance for Housing (BAH)	$#
Basic Allowance for Subsistence (BAS)	$#
Specialty Pay	$#

Month 2	
Base Pay	$#
Basic Allowance for Housing (BAH)	$#
Basic Allowance for Subsistence (BAS)	$#
Specialty Pay	$#
Moving (Y/N)? New Zip code	$#
Deploying (Y/N)	$#
Additional Fields...	

Month 3	
Base Pay	$#
Basic Allowance for Housing (BAH)	$#
Basic Allowance for Subsistence (BAS)	$#
Specialty Pay	$#
Moving (Y/N)? New Zip code	$#
Deploying (Y/N)	$#
Additional Fields...	

Future Months →

Literature review:

There are existing military pay calculators, almost all of which are web based. There is the official DoD pay calculator, and others made by non-government entities and other companies.

This design is unique in that it allows users to upload their LES, and the application will be able to pull data straight from it. No other existing solution has this capability, which greatly increases the ease of use, efficiency, and accuracy of the forecasted budget. It gives the user real-time information of what their future financial situation looks like.

Scope:

The scope of the project is to only work with DoD LES documents. There will be no persistent storage of any information on the site.

Methodology

The main idea to develop the solution is to build the program using an agile methodology. This methodology will be tailored to reflect the individual work that will be accomplished throughout the semester. At the beginning of the semester, I will establish a backlog of technical aspects that must be done to complete the project. I will then break these up into 2-week sprints, which will follow the same timeline as the project schedule with when reports are due. I will

develop estimates for task completion, and as I finish things throughout the project, I will update my estimates to be accurate based on historical data.

One design alternative is to create an executable program. This would be something like the Actual program, which is a simple budgeting application. This application uses a framework of allowing for different bank accounts to be represented, then transactions for each account are totaled. These totals are then reflected in monthly budgets and extrapolate budgets into the future based on previous months.

Another design alternative is to create it as a mobile application, an android app for example. There are many examples of budget apps which have similar concepts to those I am looking to implement. The downside for those apps is they are more geared towards being general budget trackers with higher fidelity down to monthly/weekly/daily spending and income. My program is a monthly view and is military pay specifically, which provides benefits for being specifically tailored to the unique variables which affect military pay.

Deliverables

- Source code
- Software Design Document
- User Instructions
- Compilation and Installation Instructions
- All reports listed in schedule
- Report on all libraries and open-source software used (if any)

GitHub:

https://github.com/PayLES/PayLES.git

Schedule

The schedule is for Spring 2025 Session C, from 13 Jan 2025 to 2 May 2025. All deliverables are expected to be submitted by the planned submission date of 5pm AZ time. Major milestones are the initial proposal which officially begins project kickoff, the mid-term report which is expected around 50% completion, and final demonstration/presentation which is project completion.

Week	Report	Content Description	Planned Submission Date
Week 1	Initial discussion and planning		17 Jan
Week 2			24 Jan
Week 3	Initial proposal	Document outlining the project.	31 Jan
Week 4			7 Feb

Week 5	Bi-weekly report 1	Report on project status.	14 Feb
Week 6			21 Feb
Week 7	Bi-weekly report 2	Report on project status.	28 Feb
Week 8			7 Mar
Week 9	Mid-Term Report (Full proposal)	Summarized what has been done, and based on the work so far a proposal on the remaining work.	14 Mar
Week 10			21 Mar
Week 11	Bi-weekly report 4	Report on project status.	28 Mar
Week 12			4 Apr
Week 13	Bi-weekly report 5	Report on project status.	11 Apr
Week 14			18 Apr
Week 15	Final Report	Report on what has been done with analysis and recommendations.	25 Apr
Week 16	Demonstration/ Presentation	PowerPoint presentation regarding the project, with a live demonstration and source code review.	2 May

References

- DoD Regular Military Compensation Calculator: https://militarypay.defense.gov/Calculators/RMC-Calculator/
- Military.com Military Pay Calculator: https://www.military.com/benefits/military-pay/calculator
- Federal Pay Military Calculator: https://www.federalpay.org/military/calculator?grade=O-2&years_experience=Over+2&year=2024&zip=84015&is_dependent=0&annualize=1&service=Air+Force
- Veteran Military Pay Calculator: https://veteran.com/military-pay-calculator/
- Air Force Benefits Calculator: https://myairforcebenefits.us.af.mil/NEW-Benefit-Calculators/RMC-Calculator/RMC-Calculator-Embed
- Defense Finance and Accounting Military Pay Tables: https://www.dfas.mil/militarymembers/payentitlements/Pay-Tables/