

Banner 9 Program

Overview of the Implementation

Nader Khalil – IT Core Services, Manager
Stirling Crow – IT Core Services, Specialist
Greg Gomez - IT Core Services, Programmer Analyst

June 7, 2019

Agenda

- Banner 9 Program Background
- Administrative Applications
 - Rollout Map
- Self-Service Applications
 - Road Map
- Custom Forms Development
- Questions & Answers

Banner 9 Program Background

- History of Banner
 - 2006 – Implementation of Banner 7
 - 2007 – Implementation of Banner 8
 - 2018 - End of Life Support for Oracle Forms and Reports
 - 2018- Upgrade Administrative Applications to Banner 9
 - 2019- Upgrade Self-Service Applications to Banner 9

Banner 9 Administrative Applications Rollout

March

Accounts Receivable ("T" Forms)

June

Position Control / HR ("N" Forms)
Payroll ("P" Forms)
Employee Self- Service (campus-wide)

August

Registration Application
Deactivate Banner 8 Fin Aid Forms

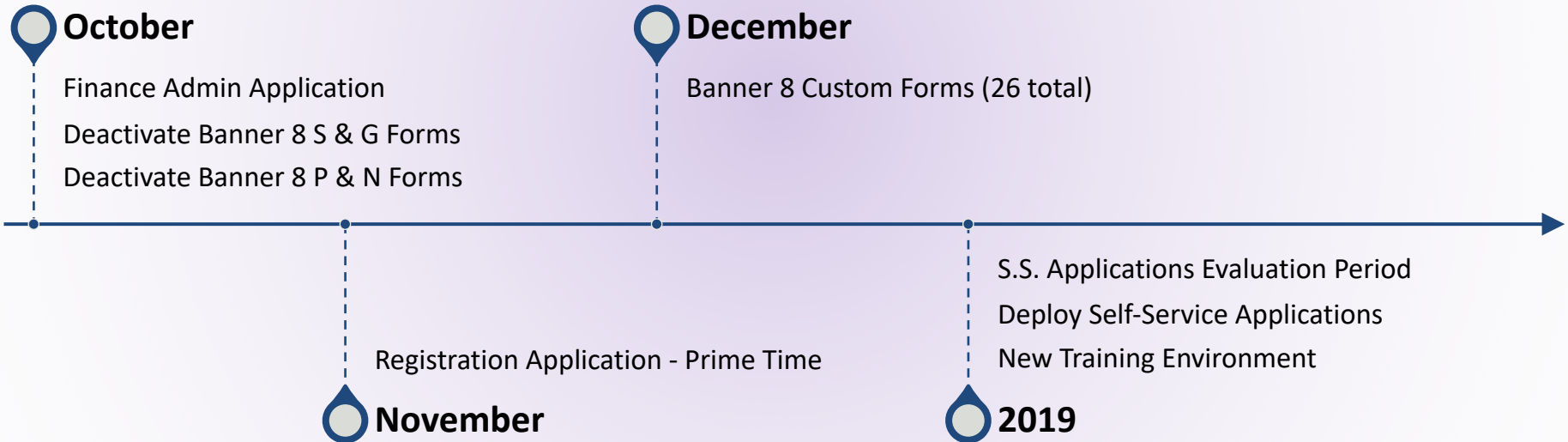
Financial Aid ("R" Forms)
Deactivate Banner 8 AR Non-Student

April

Student Admin ("S" Forms)
General Admin ("G" Forms)
Deactivate Banner 8 AR Student Forms

July

Banner 9 Administrative Applications Rollout




Banner 9 Self-Service Applications

- New Applications
 - Communication Management
 - Action Items Processing
 - Event Management
- Upgrading Existing Applications
 - Students
 - Employee
 - General
 - Finance
 - Account Receivable
 - Financial Aid
 - Faculty
 - Advisors

Banner 9 Self-Service Applications Personal Information

My Profile - Personal Information



Nader Khalil

ID Number:

[naderk@unm.edu](#)

New Mexico 87114-6538

505 4104177

[Edit](#)

Personal Details First Name Nader Date of Birth Preferred First Name Nick	Middle Name - Marital Status Personal Pronoun He/Him/His	Last Name Khalil Legal Sex Male Gender Identification Male / Cisgender Male
---	--	--

Email [Add New](#)
 @unm.edu email address (Preferred)
[naderk@unm.edu](#)

Phone Number Add New Business or work (Primary) 505 4104177	Mailing (Primary) 505 4104177
---	----------------------------------


Address [Add New](#)
 Mailing
 Current
 Albuquerque
 New Mexico 87114-6538

Emergency Contact [Add New](#)
 Albuquerque
 New Mexico 87114-6538

Additional Details Ethnicity and Race Not Hispanic or Latino	Veteran Classification I am not a veteran	Disability Status I DON'T WISH TO ANSWER
---	--	---

Other

[Directory Profile](#)
[Security Questions and Answers](#)
[Change Password](#)



The University of New Mexico

LoboWeb

Personal Information Menu

- My Addresses & Directory Info**
Update your addresses, phone numbers, display name, preferred email address, campus address and phone number, and online directory information (opens a page to Directory Self Service)
- My Emergency Contacts**
View your contact information for individual(s) UNM should contact in case of an emergency, and update them as needed
- My Race and Ethnicity Information**
View your race and ethnicity information in Banner and update it as needed
- My Disability Self-Identification**
View your disability self-identification information in Banner and update it as needed
- My Veteran Classification and Self-Identification**
View your veteran classification and self-identification information in Banner and update it as needed
- My Affirmed/Preferred First Name**
View your affirmed/preferred first name information in Banner and update it as needed.
- My Preferred Pronoun and Gender Identity**
View your preferred pronoun and gender identity information in Banner and update it as needed.
- IPRA Opt-Out of Disclosure of Home Information**
Opt-out of including your home information in a public records request
- IPRA Solicitud Para No Revelar Información de la Residencia**
Optar para no revelar su información de la residencia en solicitudes de registros públicos
- Change LoboWeb PIN**
Set a 6-digit PIN number for accessing the Payment Application or for direct access to LoboWeb

RELEASE: 6.8.3

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Banner 9 Self-Service Applications

Action Item Management • Groups • Action Item Processing

Action Item Processing

Welcome

You have the following items that require your attention.

Periodic reminders for the campus

0 of 3

[Instructions](#)

[Registration fees acknowledgement](#)

Pending

Registration fees policy

[Invitation to New Student Convocation](#)

Pending

Information about the New Student Convocation

[Flu shots available](#)

Pending

Flu shots available for campus members and their households

Invitation to New Student Convocation

Come join your fellow new students to start the new academic year!

The schedule is still being worked on (and we're planning on a few surprises), but expect:

- Introduction of key distinguished faculty
- Highlights of upcoming campus events
- Complimentary snacks and drinks
- Special edition t-shirt
- Chance of other campus swag

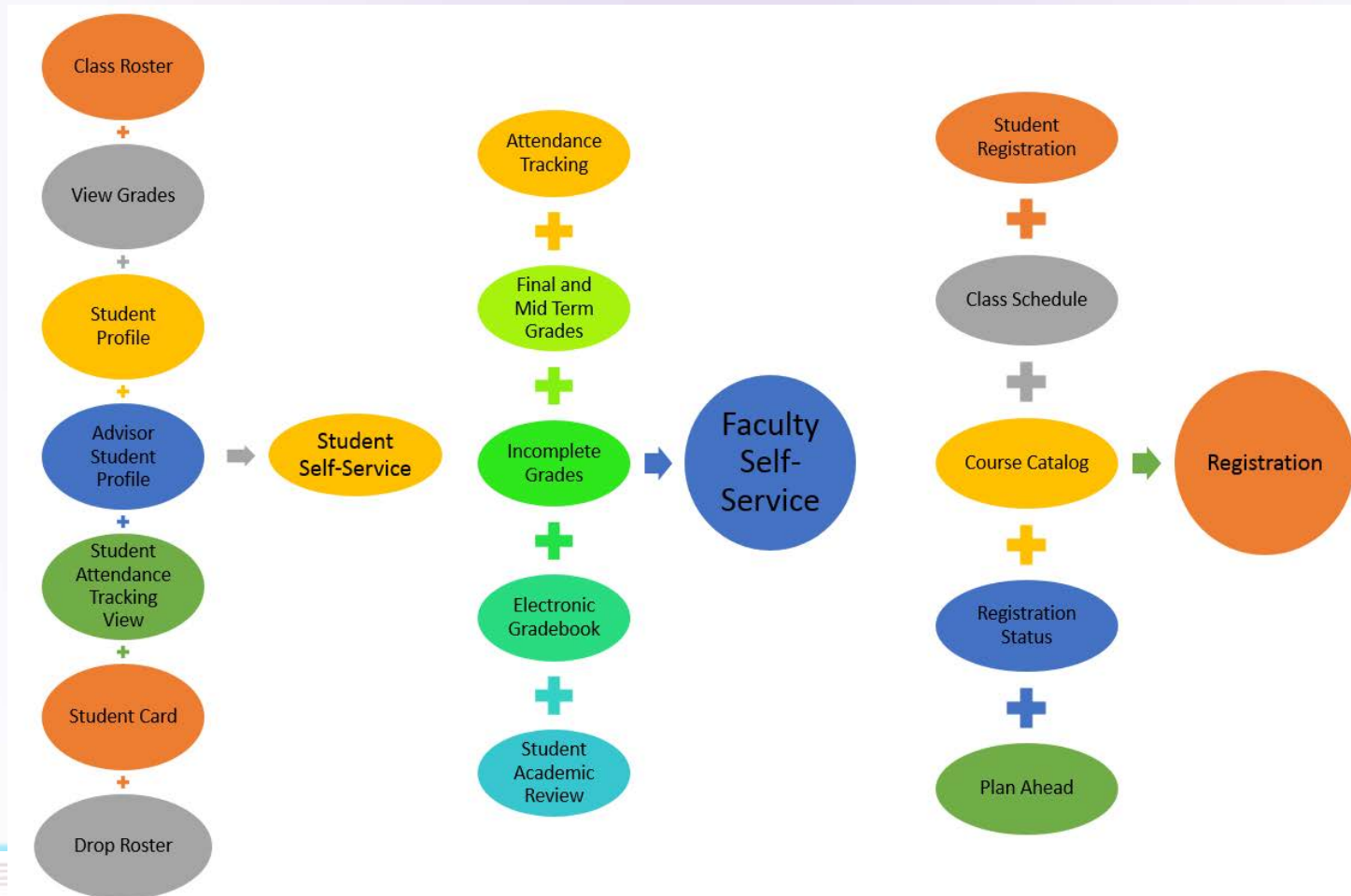
Hope to see you!

Can't wait to come! Sorry, but I won't be able to make it

Save

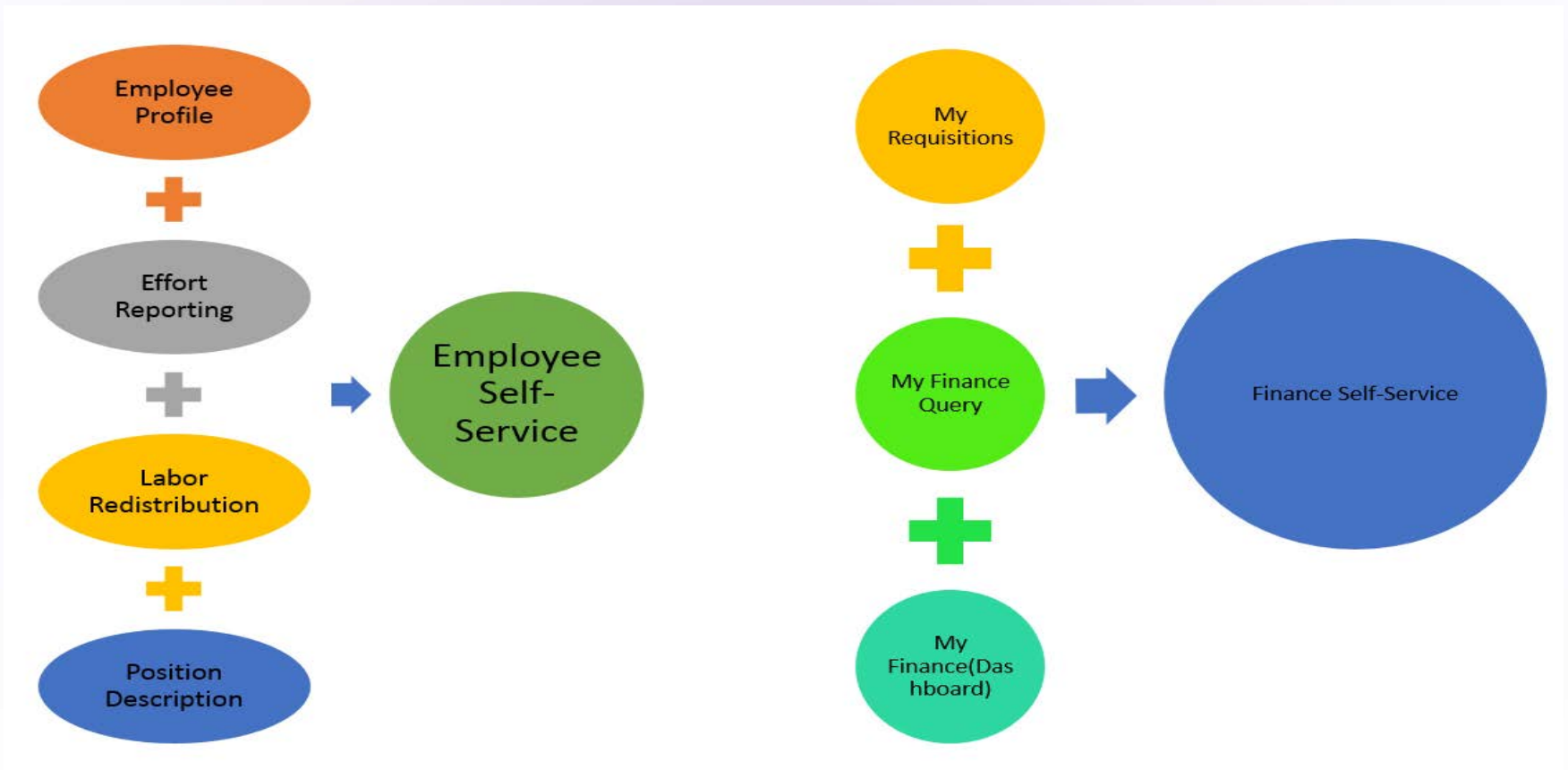
Banner 9 Self-Service Applications

Banner 9 – Student Self-Service Applications



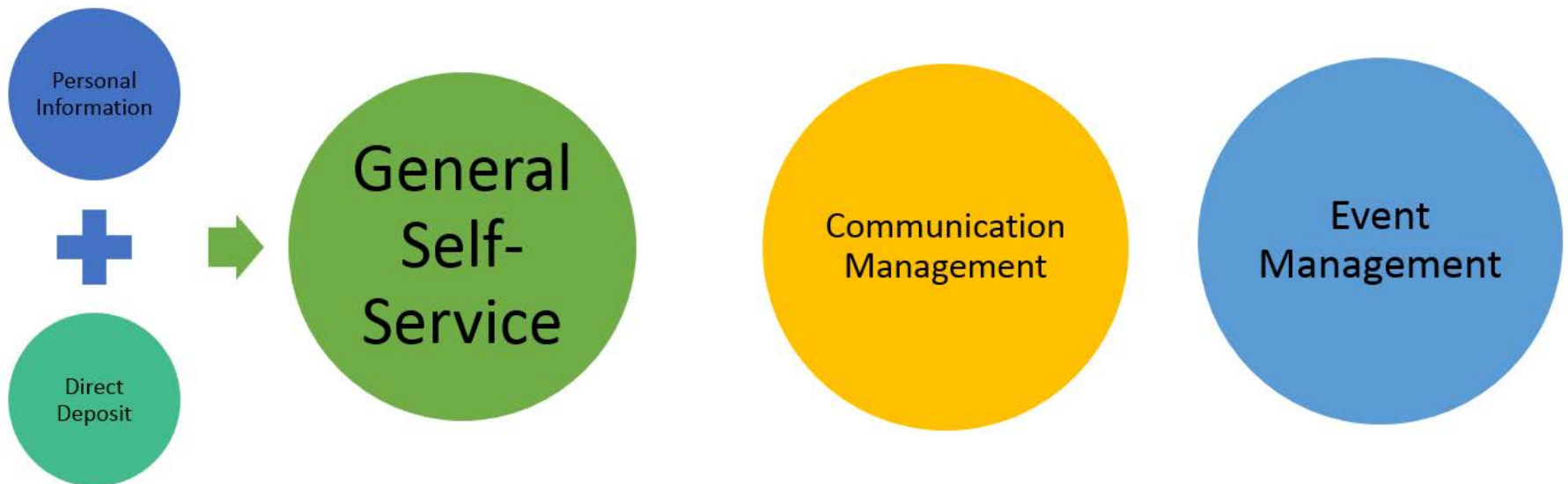
Banner 9 Self-Service Applications

Banner 9 – HR& Finance Self-Service Applications



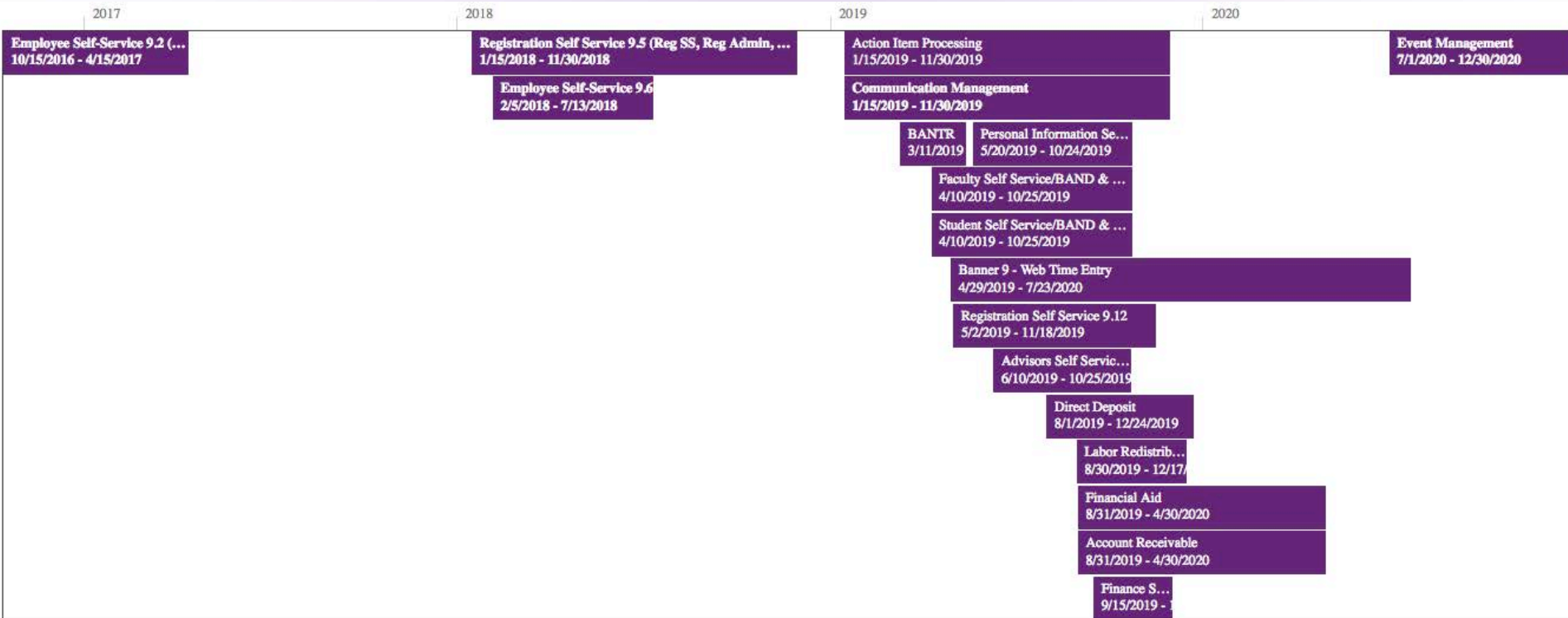
Banner 9 Self-Service Applications

Banner 9 – General Self-Service Applications



Banner 9 Self-Service Applications

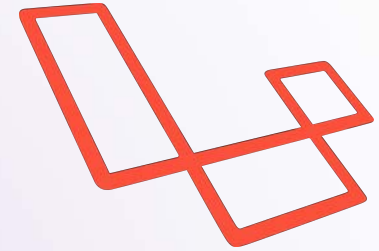
Banner 9 Self-Service Applications - Road Map



Custom Forms Development

- We have a need for rapid development of web applications that connect to Banner.
- We have a need for recreating custom functionality found in the older Banner 8 forms.
- Our current development language (PLSQL) does not support modern day web applications.
- We need a development framework that is geared toward web applications that use Oracle databases.
- Several of our developers here at UNM have experience with the PHP language.
- PHP is also one of the most common programming languages. According to one survey, over 80% of all websites are powered by PHP.

Custom Forms Development



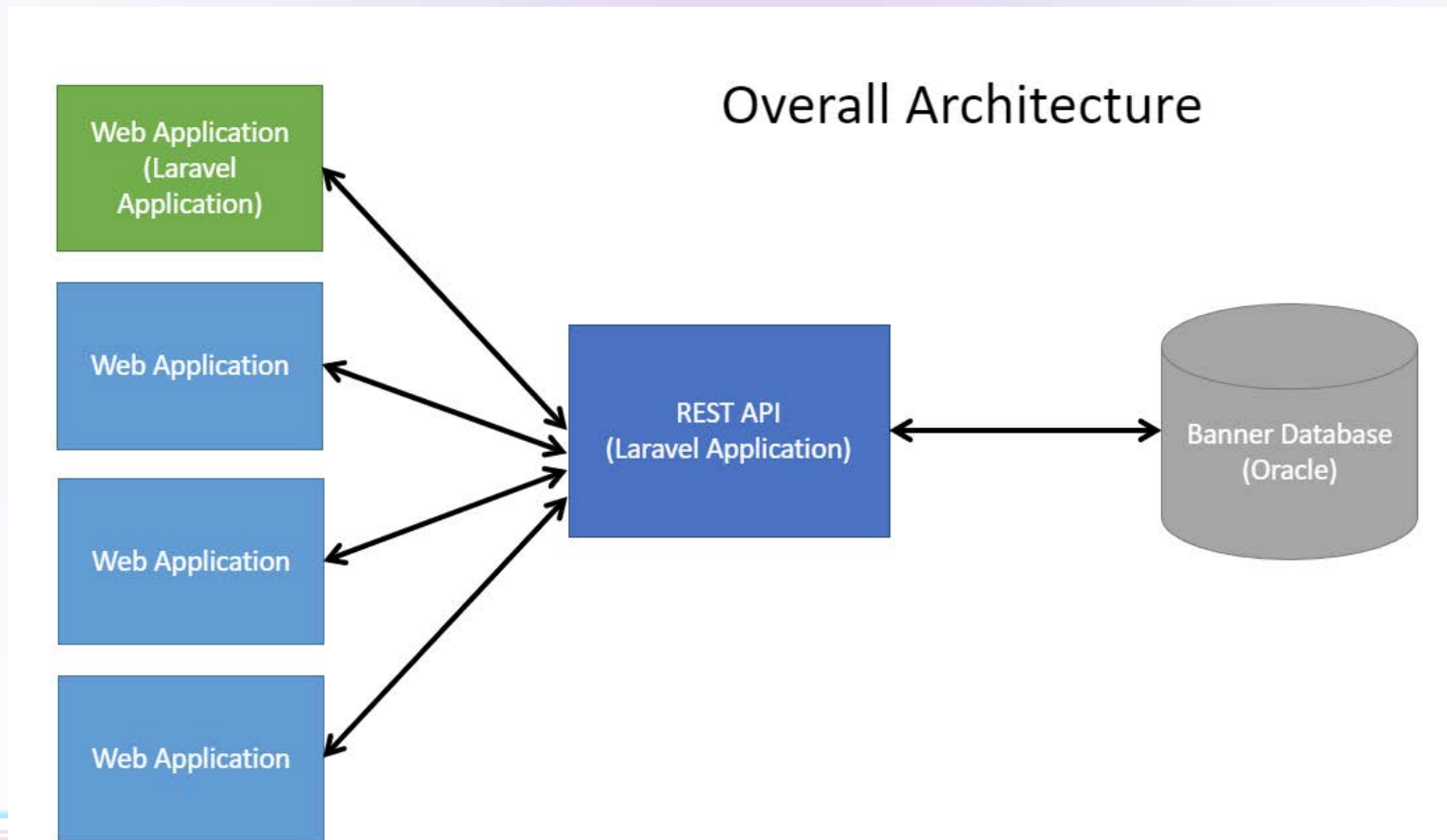
- Laravel
 - We have chosen the Laravel Framework to develop web applications.
 - It is a contemporary MVC framework that uses the PHP language.
 - This framework can:
 - Be used to build REST APIs.
 - Be used to build web applications.

Custom Forms Development

- What is a REST API?
 - REST is a way to deliver web services.
 - It uses the HTTP protocol.
 - Modern day web applications interact with REST APIs (and mobile applications use REST APIs).
 - Examples of public REST APIs:
 - <https://api.spacexdata.com/v3/history>
 - <https://anapiofficeandfire.com/api/books/1>
 - JSON format

Custom Forms Development

- Architecture



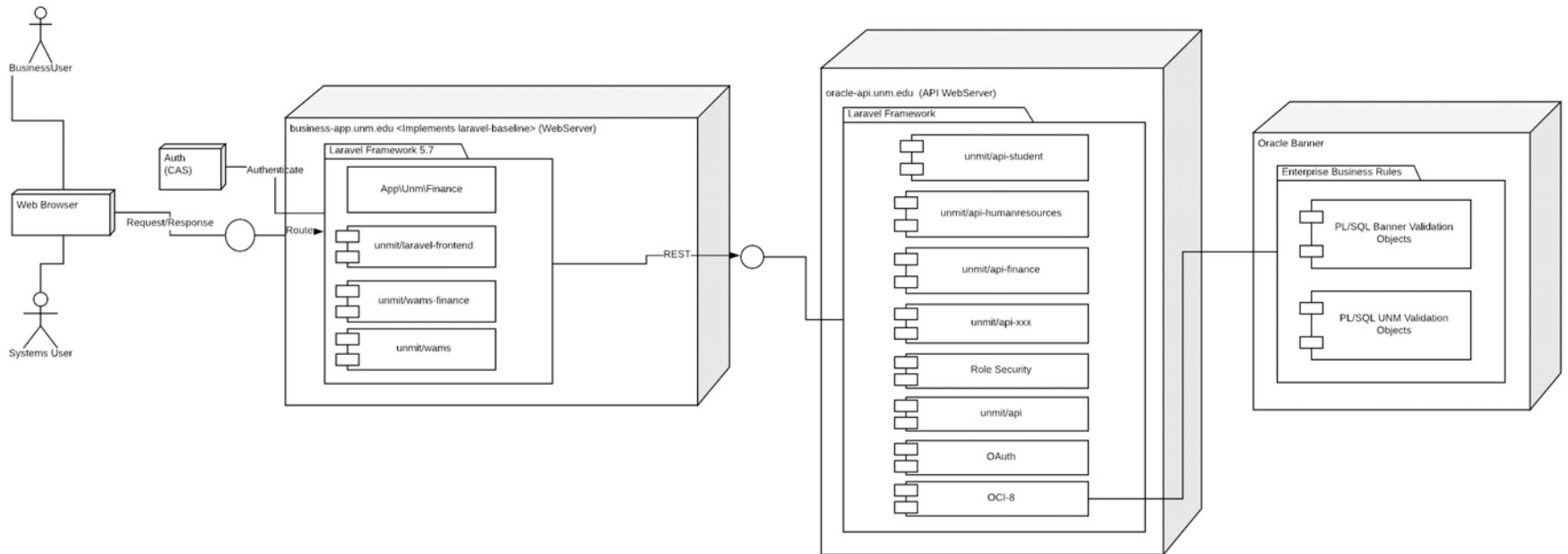
Custom Forms Development

- Architecture

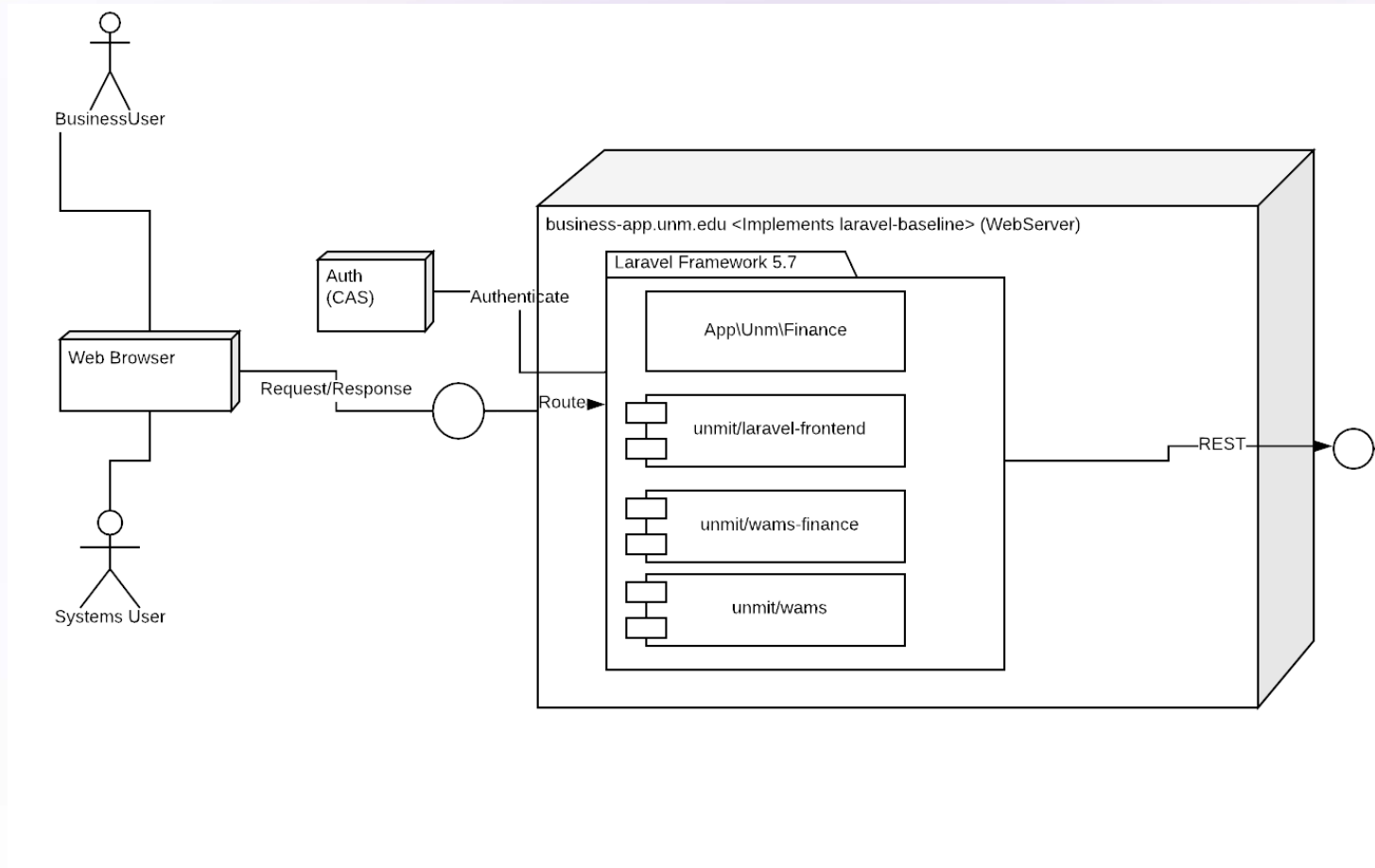
RESTful-Deployment Diagram

Ron V Estrada, Stirling Crow, Greg Gomez, Sung-Hee Lee

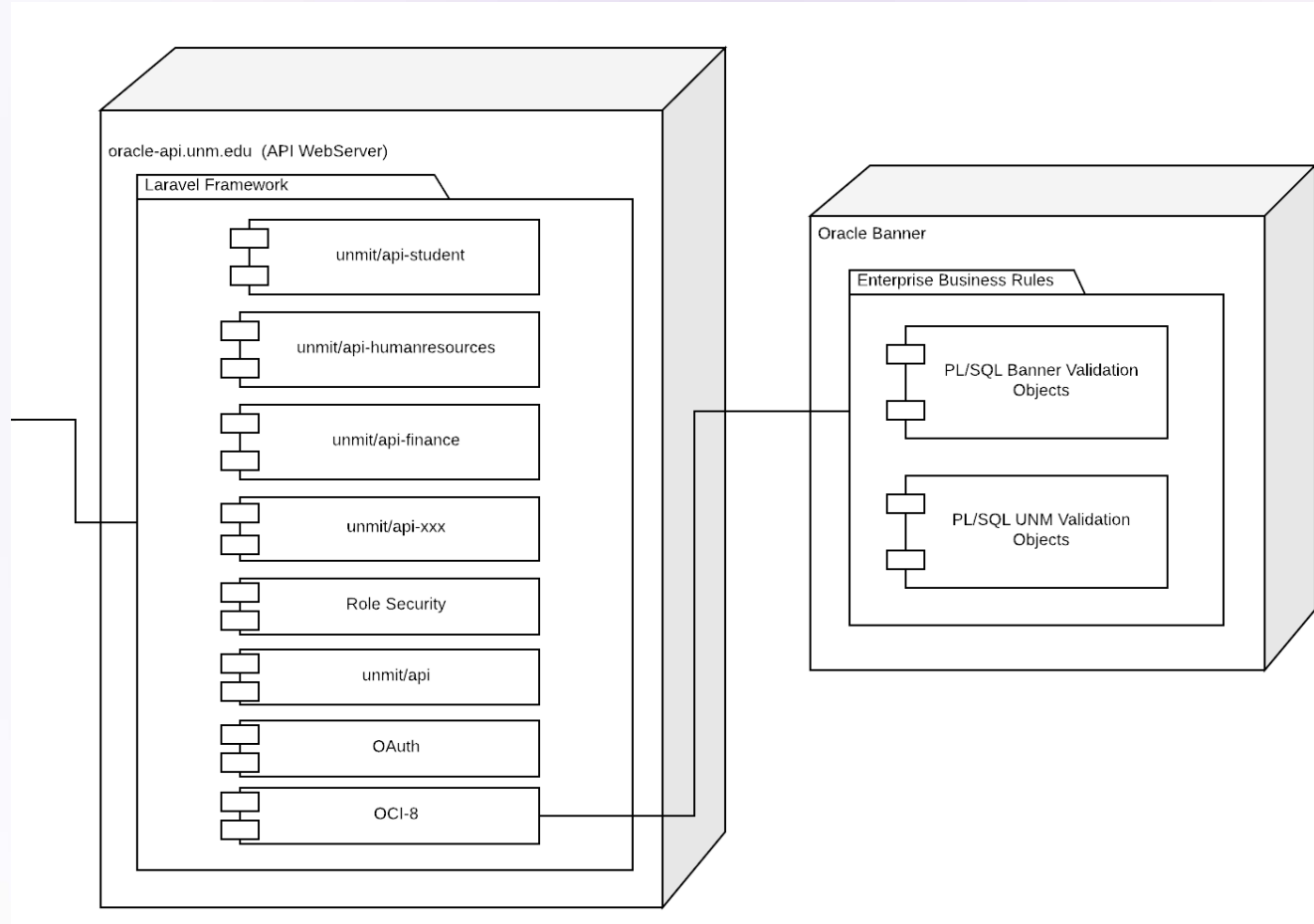
June 4, 2019



Custom Forms Development

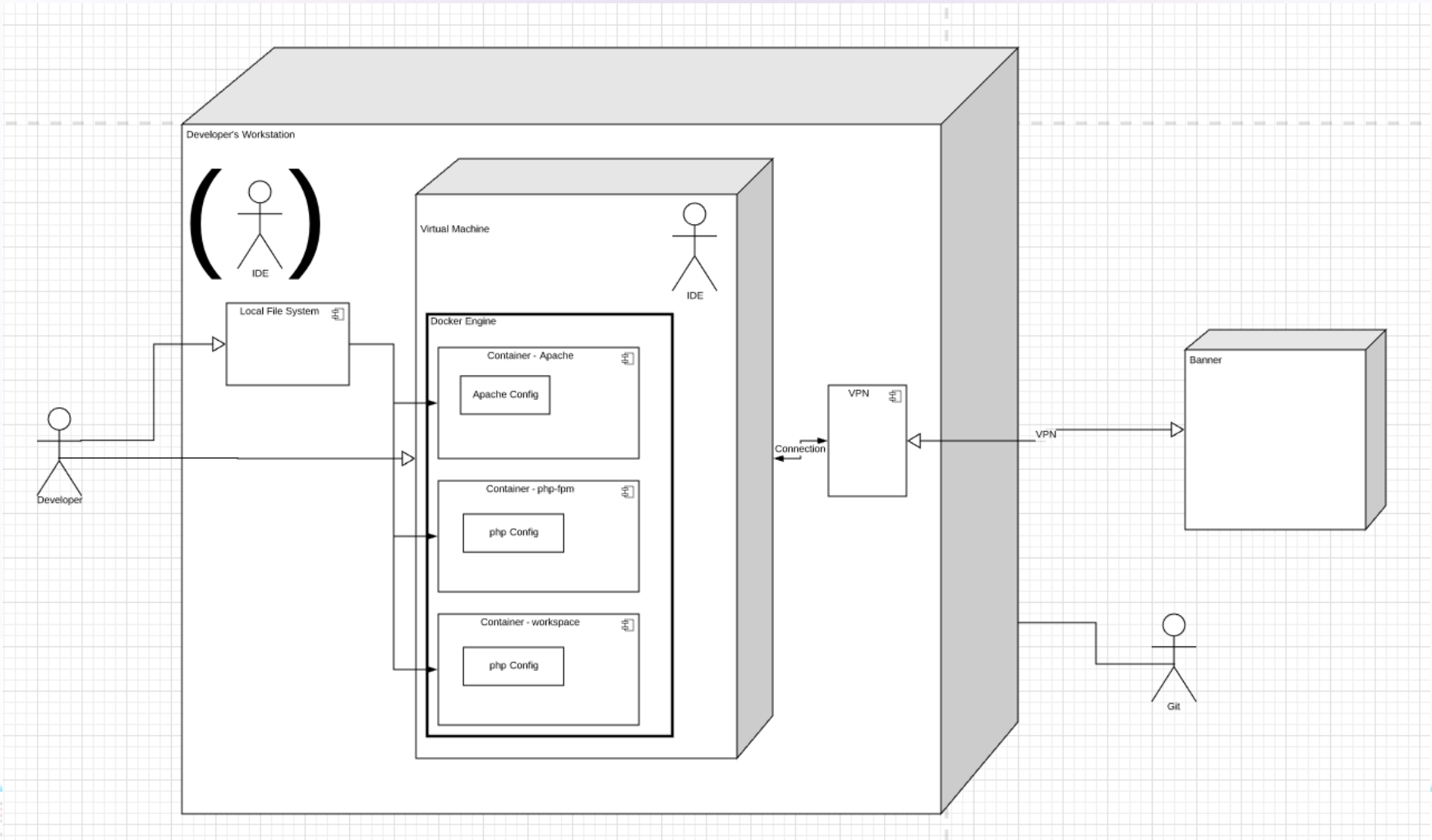


Custom Forms Development



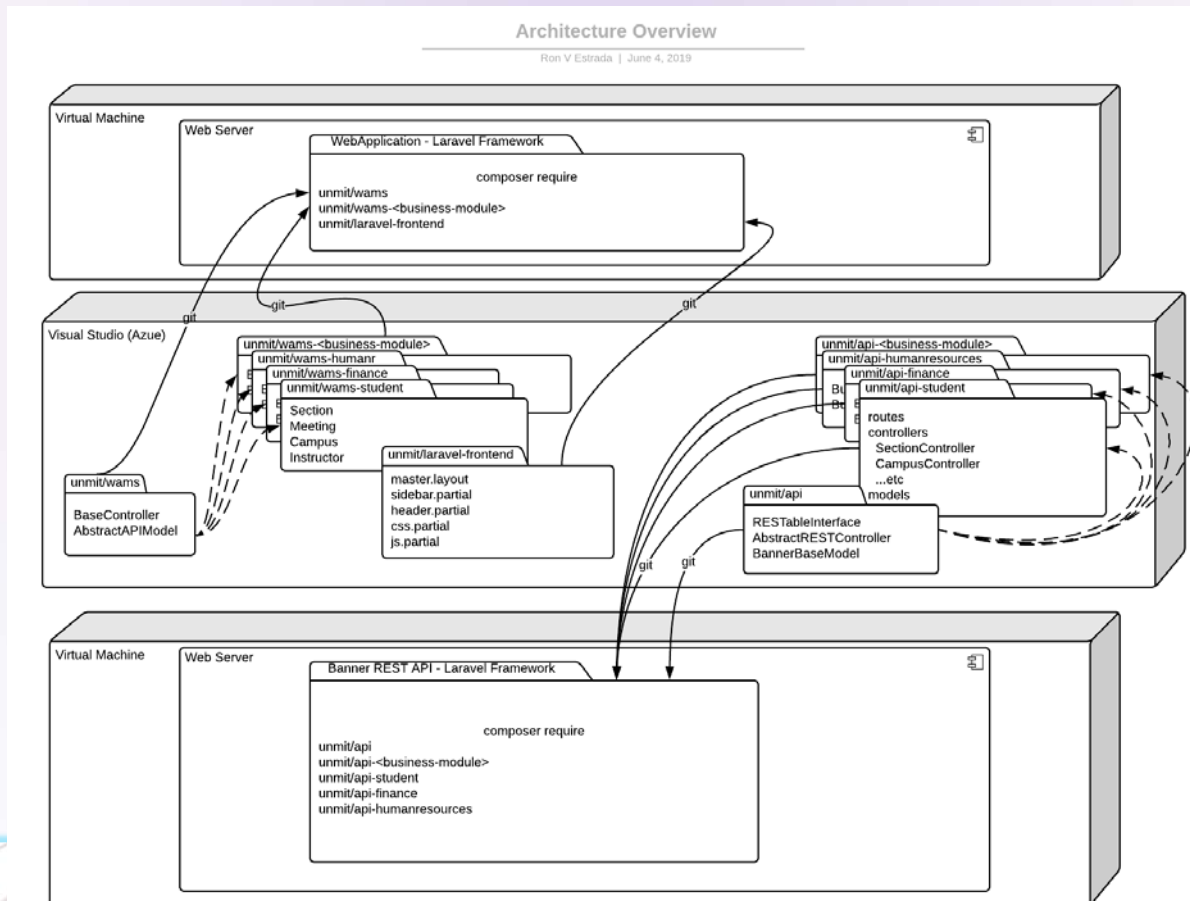
Custom Forms Development

Developer Work Environment



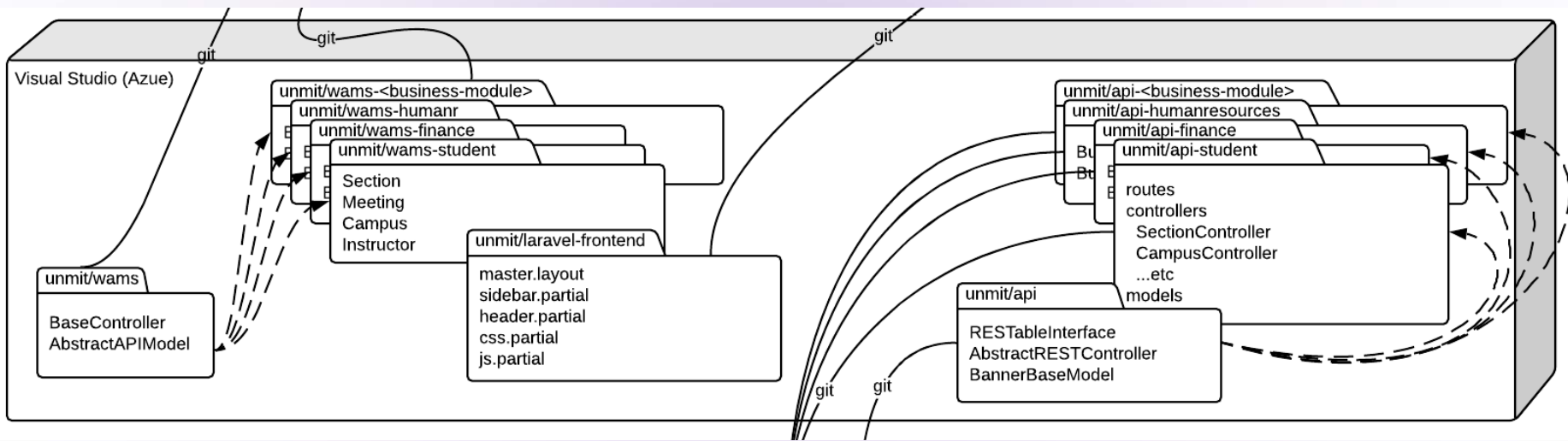
Custom Forms Development

- Architecture



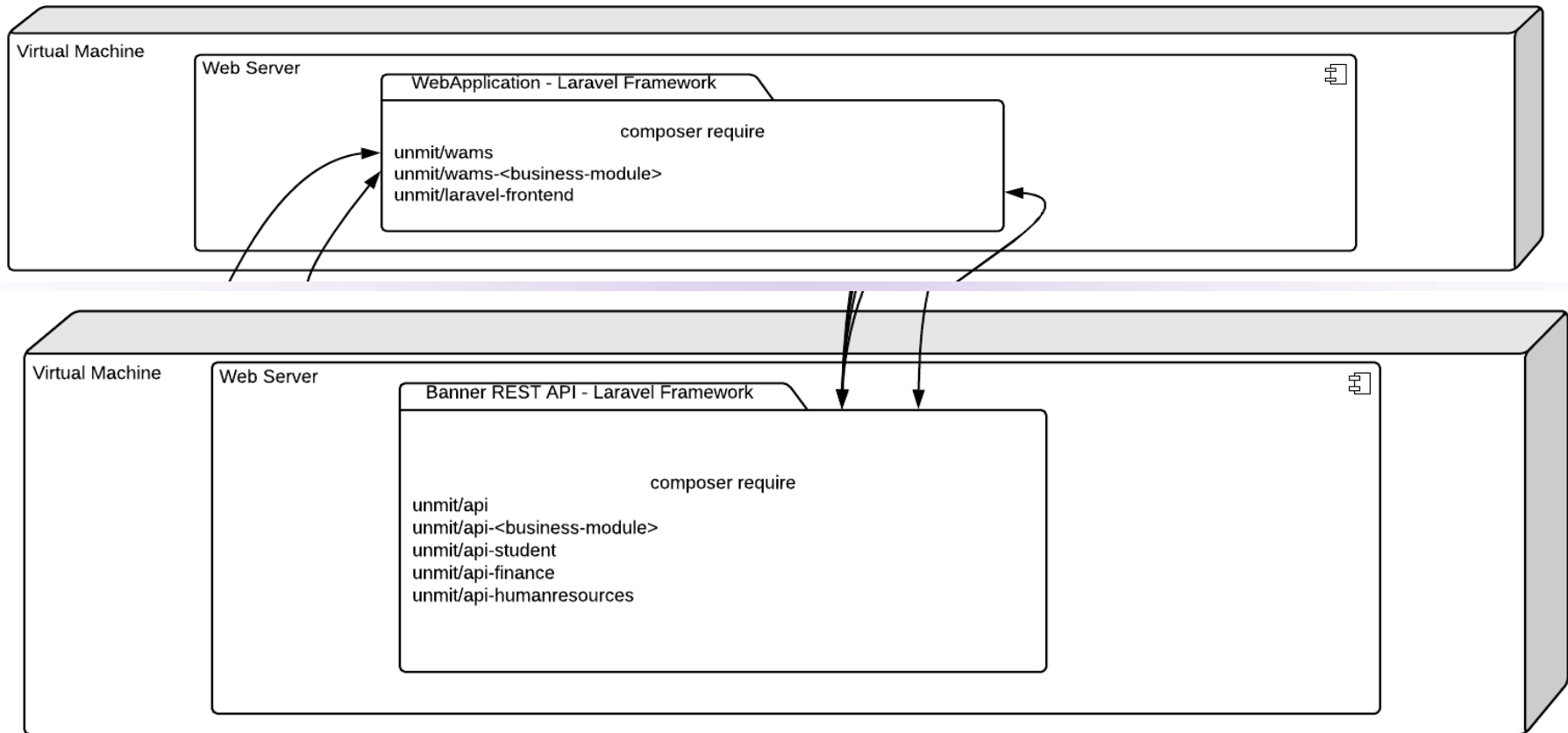
Custom Forms Development

- Architecture - GIT



Custom Forms Development

- Architecture



Custom Forms Development

- Overview of Laravel Application with Banner Custom Forms Functionality
 - SZASECT
 - SZVDIST

Custom Forms Development - SZVDIST

Oracle Fusion Middleware Forms Services: Open > SZVDIST

File Edit Options Block Item Record Query Tools Help

High School-District Lookup Form SZVDIST 7.4 (BANP)

HS Code	HS Name	District Code	District Name	Public/Non-Public	Activity Date	User Id
320000	ALAMOGORDO HIGH SCHOOL	46	Alamogordo	P	29-JUL-2008	INITIAL
320001	ALAMOGORDO CHRISTIAN ACADEMY	46	Alamogordo	N	29-JUL-2008	INITIAL
320002	NM SCH BLIND VISUALLY IMPAIRED	46	Alamogordo	N	29-JUL-2008	INITIAL
320003	ALBUQUERQUE ACADEMY	01	Albuquerque	N	29-JUL-2008	INITIAL
320004	ECADEMY ALTERNATIVE SCHOOL	01	Albuquerque	P	29-JUL-2008	INITIAL
320005	ALBUQUERQUE INDIAN S	01	Albuquerque	N	29-JUL-2008	INITIAL
320007	CALVERT ACADEMY	01	Albuquerque	N	29-JUL-2008	INITIAL
320008	DEL NORTE HIGH SCHOOL	01	Albuquerque	P	29-JUL-2008	INITIAL
320009	ELDORADO HIGH SCHOOL	01	Albuquerque	P	29-JUL-2008	INITIAL
320010	FOOTHILL HIGH SCHOOL-YDDC	01	Albuquerque	N	29-JUL-2008	INITIAL
320011	CIBOLA HIGH SCHOOL	01	Albuquerque	P	29-JUL-2008	INITIAL
320012	FREEDOM HIGH SCHOOL	01	Albuquerque	P	29-JUL-2008	INITIAL
320013	GOOD NEWS CHRISTIAN SCHOOL	01	Albuquerque	N	29-JUL-2008	INITIAL
320014	EVANGEL CHRISTIAN ACADEMY	01	Albuquerque	N	29-JUL-2008	INITIAL
320015	HARWOOD GIRLS SCHOOL	01	Albuquerque	N	29-JUL-2008	INITIAL
320016	BELLA VISTA CHRISTIAN ACADEMY	01	Albuquerque	N	29-JUL-2008	INITIAL
320017	CORONADO ACADEMY	01	Albuquerque	N	29-JUL-2008	INITIAL
320018	GRACE BRETHERN CHRISTIAN ACAD	65	Farmington	N	29-JUL-2008	INITIAL
320019	HOPE CHRISTIAN SCHOOL	01	Albuquerque	N	29-JUL-2008	INITIAL
320020	HIGHLAND HIGH SCHOOL	01	Albuquerque	P	29-JUL-2008	INITIAL

Record: 1/? | ... | List of Valu... | <-OSC>

Custom Forms Development - SZVDIST

Banner 9 Custom - Mozilla Firefox

ban-student-app.unm.edu/high-school

Student - Custom Sections stirlingcrow

High Schools

Add HighSchool

Show 10 entries Search:

SBGI Code	Dist	Desc	Type Ind	Act Date	User	
20000	46	Stirling	P	05/31/2019	laravel	Edit Delete
200002	46	Stirling2	N	06/03/2019	laravel	Edit Delete
320000	46	Alamogordo	P	07/29/2008	INITIAL	Edit Delete
320001	46	Alamogordo	N	07/29/2008	INITIAL	Edit Delete
320002	46	Alamogordo	N	07/29/2008	INITIAL	Edit Delete

Messages Timeline Exceptions Views 18 Route Queries 0 Mails Auth Gate Session Request

GET high-school 8.62MB 4.69s 7.2.4

Custom Forms Development - SZVDIST

Banner 9 Custom x +

ban-student-app.unm.edu/high-school

Student - Custom Sections stirlingcrow

If Necessary to use a Banner

High Schools

Add HighSchool

Show 10 entries Search:

SBGI Code	Dist	Desc	Type Ind	Act Date	User	
320000	46	Alamogordo	N	07/29/2008	INITIAL	Edit Delete
320001	46	Alamogordo	N	07/29/2008	INITIAL	Edit Delete
320002	46	Alamogordo	N	07/29/2008	INITIAL	Edit Delete
320063	46	Alamogordo	P	07/29/2008	INITIAL	Edit Delete

Custom Forms Development - SZVDIST

Banner 9 Custom x +

ban-student-app.unm.edu/high-school

Student - Custom Sections stirlingcrow

Edit Location

High School Code:

Dist Code:

Dist Desc:

Type Ind:

Close Update

SBGI Code	High School Code	Dist Code	Dist Desc	Type Ind	Created At	Created By	Actions
	200002	46	Stirling2	N	06/03/2019	laravel	Edit Delete
	200003	46	Stirling3	C	06/04/2019	laravel	Edit Delete
	320000	46	Alamogordo	N	07/29/2008	INITIAL	Edit Delete
	320001	46	Alamogordo	N	07/29/2008	INITIAL	Edit Delete

Add HighSchool

Custom Forms Development - SZASECT

Oracle Fusion Middleware Forms Services: Open > SZASECT

File Edit Options Block Item Record Query Tools Help

Schedule Form SZASECT 8.4 (BANP)

Term: 202010 CRN: 47942 Create CRN: Copy CRN: Subject: ENGL Course: 100 Title: College Reading and Writing

Course Section Information Section Enrollment Information Meeting Times and Instructor

Subject: ENGL English CEU Indicator:

Course Number: 100 Title: College Reading and Writing Credit Hours: 1.000 None To Or 4.000

Section: 400 Billing Hours: 1.000 None To Or 4.000

Cross List: Contact Hours: 1.000 None To Or 4.000

Campus: GA Gallup Lecture: 3.000

Status: A Active Lecture: 1.000 None To Or 4.000

Schedule Type: LC Lecture Lecture: 3.000

Instructional Method: Lecture: 1.000 None To Or 4.000

Integration Partner: Lab: None To Or

Grade Mode: Other: None To Or

Session:

Special Approval: AA Advisor permission required

Duration:

Part of Term: 1 20-JAN-2020 16-MAY-2020 16

Registration Dates:

Start Dates:

Maximum Extensions: 0

Prerequisite Check Method: Basic or None CAPP

Link Identifier:

Attendance Method:

Weekly Contact Hours:

Daily Contact Hours:

Print Voice Response and Self-Service Available

Gradable Tuition and Fee Waiver

Long Title Comments Syllabus

Subject: press Count Query Hits for existing courses, Duplicate Record for credit information.

Record: 1/1 <OSC>

Custom Forms Development - SZASECT

Oracle Fusion Middleware Forms Services: Open > SZASECT

File Edit Options Block Item Record Query Tools Help

Schedule Form SZASECT 8.4 (BANP)

Term: 202010 CRN: 47942 Create CRN: Copy CRN: Subject: ENGL Course: 100 Title: College Reading and Writing

Course Section Information Section Enrollment Information Meeting Times and Instructor

Enrollment Details Reserved Seats

Enrollment Details

Maximum:	<input type="text" value="23"/>	Waitlist Maximum:	<input type="text" value="0"/>	Projected:	<input type="text"/>
Actual:	<input type="text" value="0"/>	Waitlist Actual:	<input type="text" value="0"/>	Prior:	<input type="text" value="19"/>
Remaining:	<input type="text" value="23"/>	Waitlist Remaining:	<input type="text" value="0"/>	<input type="checkbox"/> Reserved	

Generated Credit Hours:

Census One	Census Two
Enrollment Count: <input type="text" value="0"/>	Enrollment Count: <input type="text" value="0"/>
Freeze Date: <input type="text" value="07-FEB-2020"/>	Freeze Date: <input type="text" value="07-FEB-2020"/>

Maximum enrollment for section; press Count Query Hits to enter reserved seats.

Record: 1/1 | | ... | | <OSC>

Custom Forms Development - SZASECT

Oracle Fusion Middleware Forms Services: Open > SZASECT

File Edit Options Block Item Record Query Tools Help

Schedule Form SZASECT 8.4 (BANP)

Term: 202010 CRN: 47942 Create CRN: Copy CRN: Subject: ENGL Course: 100 Title: College Reading and Writing

Course Section Information Section Enrollment Information Meeting Times and Instructor

Times and Instructors Scheduler Preferences

Meeting Times

Meeting Dates Meeting Location and Credits

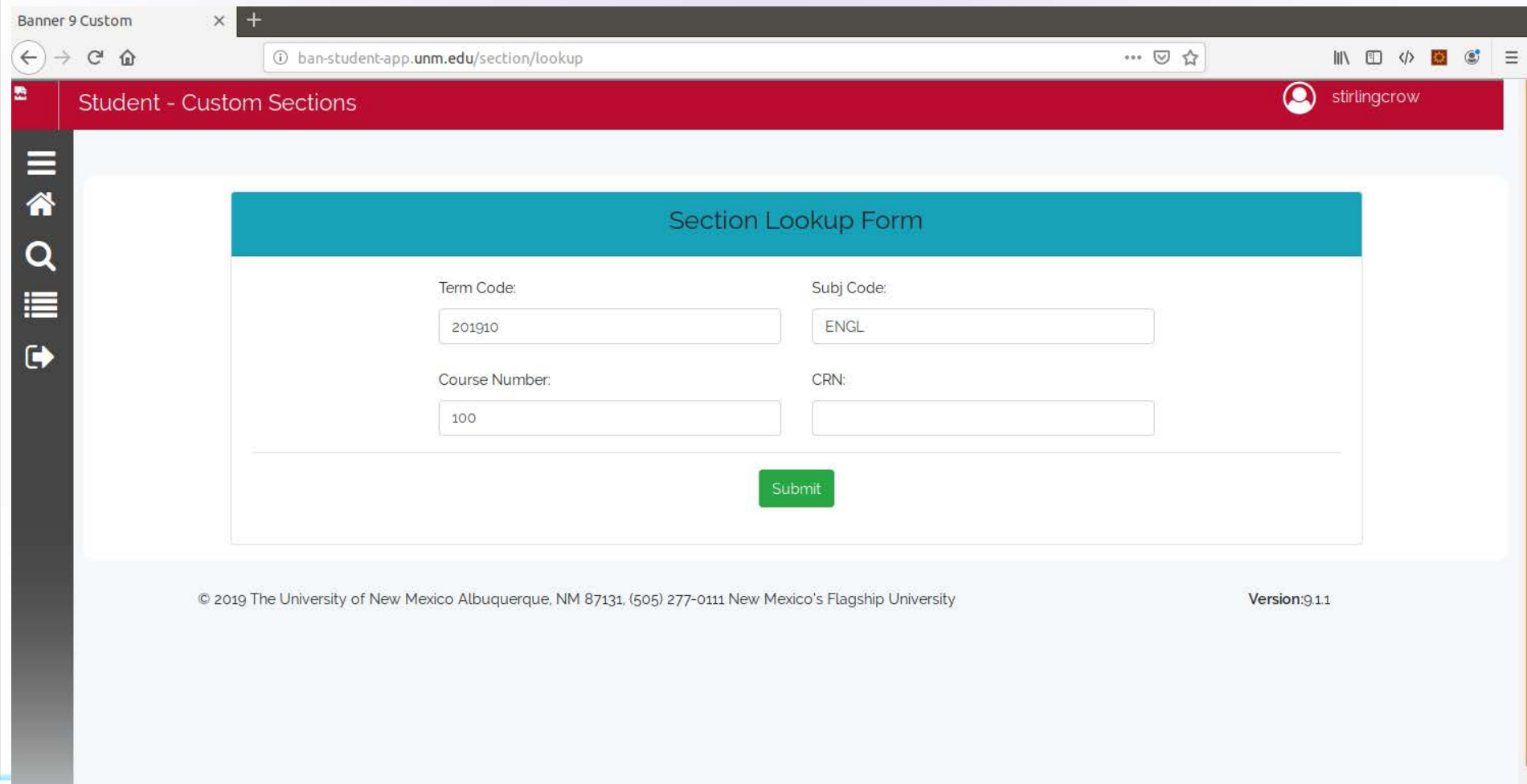
Meeting Time	Meeting Type	Start Date	End Date	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Start Time	End Time	Session Indicator
	CLAS	20-JAN-2020	16-MAY-2020	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1100	1330	01
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Instructor Session

Session Indicator	ID	Instructor Name	Instructional Workload	Percent of Responsibility	Primary Indicator	Override Indicator	Percent of Session
01	101877176	Lopres, Jaypee R.	.000	100	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100
					<input type="checkbox"/>	<input type="checkbox"/>	
					<input type="checkbox"/>	<input type="checkbox"/>	
					<input type="checkbox"/>	<input type="checkbox"/>	


Meeting time code; press LIST for codes. Press DUPLICATE ITEM to access Cross List Form.
Record: 1/1 | ... | List of Valu... | <OSC>

Custom Forms Development



Banner 9 Custom x +

ban-student-app.unm.edu/section/lookup

Student - Custom Sections  stirlingcrow

Section Lookup Form

Term Code: Subj Code:

Course Number: CRN:

© 2019 The University of New Mexico Albuquerque, NM 87131, (505) 277-0111 New Mexico's Flagship University Version:9.1.1

Custom Forms Development

Banner 9 Custom x +

ban-student-app.unm.edu/section/results

Student - Custom Sections stirlingcrow

Sections

Term Code	CRN	Subject Code	Course #		
201910	38979	ENGL	100	Edit	Back
201910	45846	ENGL	100	Edit	Back
201910	47942	ENGL	100	Edit	Back
201910	47964	ENGL	100	Edit	Back
201910	47969	ENGL	100	Edit	Back
201910	47975	ENGL	100	Edit	Back
201910	47980	ENGL	100	Edit	Back
201910	47981	ENGL	100	Edit	Back
201910	47991	ENGL	100	Edit	Back
201910	47993	ENGL	100	Edit	Back
201910	49052	ENGL	100	Edit	Back

Custom Forms Development



UNM IT Banner 9 Custom Forms

Please Select:

Section Lookup

High School Lookup

Section Edit

Term Code: 201910

CRN: 47964

Campus:

Gallup

Status Type:

A

Max Enrollment:

23

Submit

Meeting Locations

Add Location

Meeting Type	Start Date	End Date	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Start Time	End Time	
CLAS	01/14/2019	05/11/2019		T		R				1730	1845	Edit Delete

Instructors

Add Instructor

Instructor	Session Indicator	Percent of Responsibility	Primary Indicator	Override Indicator	Percent of Session	
	01	100	Y		100	Edit Delete

Custom Forms Development

The screenshot displays a web browser window with the URL `laravel-webapp.unm.edu/api/section/499539`. An "Edit Location" modal is open, containing the following form fields:

- Meeting Type: CLAS
- Building: GNCC
- Room: 126
- Session Indicator: 01
- Start Date: 1/14/2019
- End Date: 5/11/2019
- Start Time: 1730
- End Time: 1845
- Schedule Type: LC
- Hours per Week: 2.5
- Credit Hours: 3
- Override Indicator: (empty)

Below the form are checkboxes for days of the week: Mon, Tue, Wed, Thu, Fri, Sat, Sun.

The background interface includes a sidebar with "Please Select" and "Section Lookup", and a table of "Instructors":

Instructor	Session Indicator	Percent of Responsibility	Primary Indicator	Override Indicator	Percent of Session
	01	100	Y		100

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Thank You

Questions?

For more information log to
<http://banner9.unm.edu>