

01/15: Risks and Prototypes

The Capstone Experience

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*From Students...
...to Professionals*

01/15: Announcements

- Informal Team Photos Today: Teams Michigan State University ITS - Volkswagen
- Check Website Team Photo Names and Hometowns
- Using Google Calendar
 - Must Use MSU Email Address
 - Watch for Double Booking
- Apple Developer License
 - Request Invitation from James or Ryan
 - Team Members are Members
 - James and Ryan are Admins
- PowerPoint Slide Deck Submission Instructions
 - Read Carefully
 - File Name Conventions
 - All Lower Case
 - Replace Blanks with Dashes
 - Examples
 - ❖ "Spectrum Health" → "spectrum-health"
 - ❖ "team-[team-name]-status-report.pptx" → "team-spectrum-health-team-status-report.pptx"
 - Submit to Dr. D. and your client by the deadline.
- Scheduling Client Conference Calls
- Absences
 - From Meetings
 - From "Working"
- Does anyone need equipment? See James and Ryan.
- Apologies: Teams and Names
- Issues? Problems? Questions?



Risks and Prototypes

➤ Risks

- Prototypes

Identifying Risks

- What You Don't
 - Know
 - Understand
 - Know How to Do
- Normally
 - Major Project Features
 - “Showstoppers”
- Varies From
 - Not Familiar With But (Probably) Can Learn to
 - Absolutely No Idea How to Do It

What are you worried about?

What should you be worried about?



Example Risks

Including but not limited to...

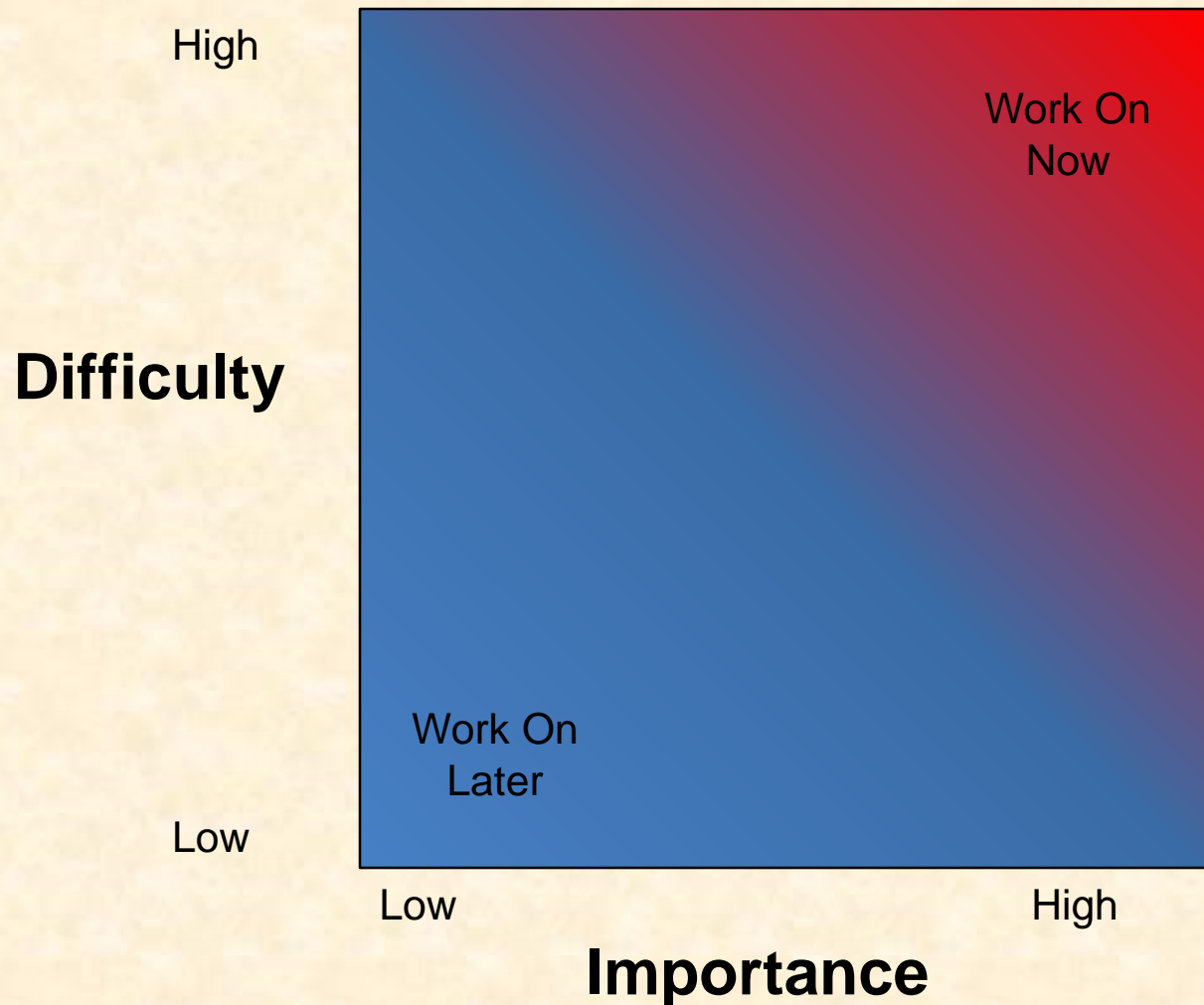
- Business Processes
- Key Application Features
- Hardware Systems
- Software Systems
- Development / Programming Environments
- Programming Languages
- Etc...



Prioritizing Risks

- Classify Difficulty
 - High Very Hard, No Idea How to Do
 - Medium
 - Low Not Hard, Probably Doable
- Classify Importance
 - High Showstopper, Must Have
 - Medium
 - Low Not Vital, Nice to Have

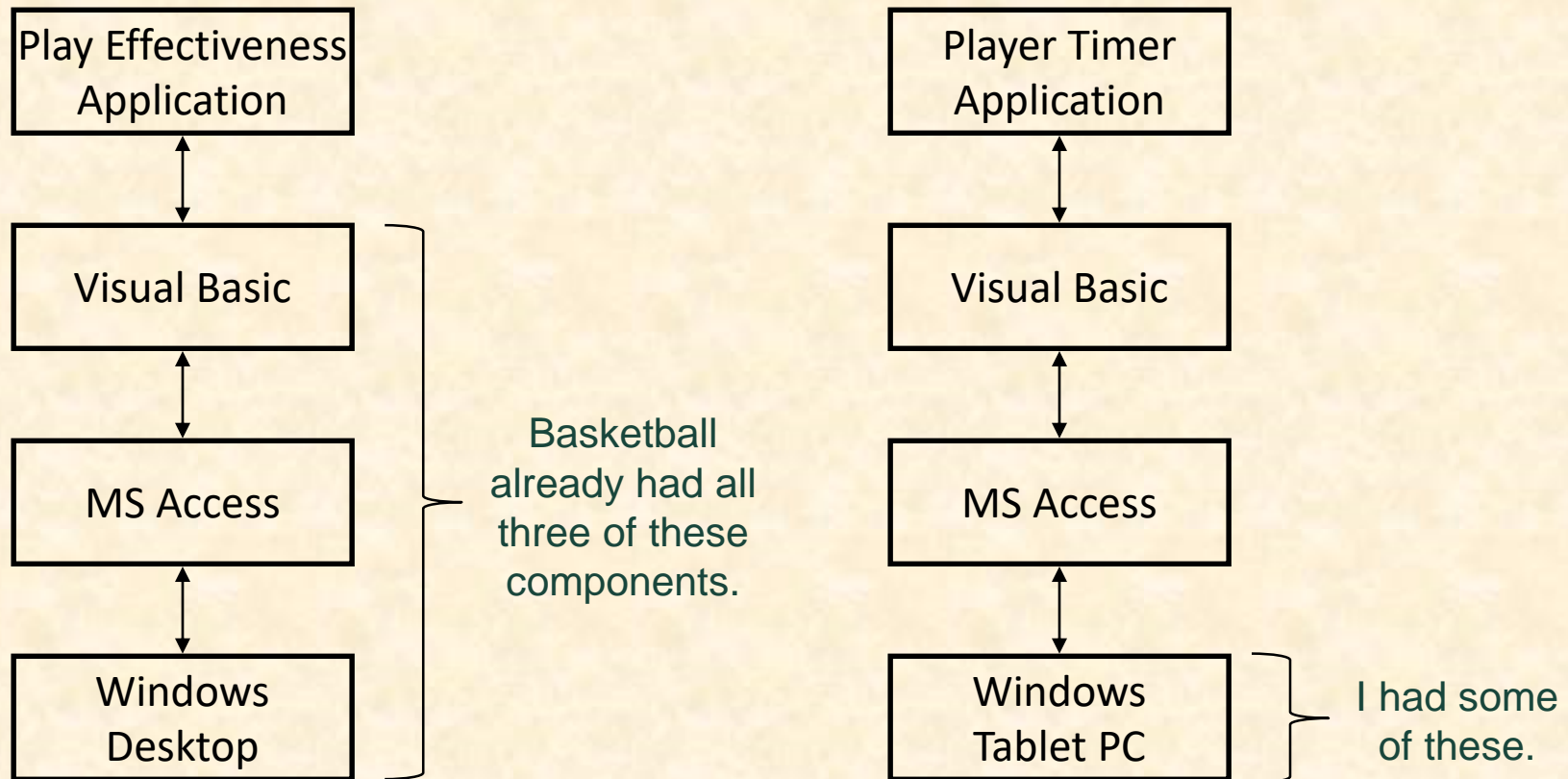
Prioritizing Risks



Case Studies: Basketball Apps

- Play Effectiveness
 - Determine Effectiveness of Plays
 - Record All Plays with Results
 - Produce Reports of Effectiveness
- Player Timer
 - Keep Track of Player Times
 - Record Minutes Played and Rested
 - Use On the Bench, During the Game

Basketball Apps Architectures



Basketball Apps Risks

- What SDK should I use?
- Can I write this in Visual Basic?
- How do I make a GUI in VB?
- How do I interface VB with Access?
 - Create/Open/Save a Database?
 - Read/Write Records?
 - Traverse Records?
- How do I implement clocks in Windows?
 - Game Clock?
 - Wall Clock?
- How do I generate a report from Access?

Mitigating Risks

- Use Existing Resources

- Including But Not Limited To

- Faculty
 - Other Students
 - Product Demos
 - Book Sample Code
 - Downloadable Examples
 - Wizards
 - Etc...

Nota Bene:

1. Check license if including in project.
2. Document.
3. Inform client.

- Test Drive

- Install
 - Compile
 - Extend
 - Etc...

- Build Prototypes

- Single Purpose
 - Quick-and-Dirty



Basketball Apps Risk Mitigation

- Game Clock
 - Start /Stop
 - Counts Down
 - By Minutes:Seconds
- Handling Access Records
 - Write Number
 - Read Number
 - Add Up Numbers

Start	19:55
Stop	

Write	7
Read	14
Add Up	55



Risks and Prototypes

✓ Risks

➤ Prototypes

Prototypes

- Developed
 - Early
 - Rapidly
- Implement Subset of the Requirements
- Done for Variety of Reasons
- Are Not Finished Goods
- “Hacking” (Good Sense)

Why? Answer Questions

Help Determine...

- Specifications
 - Functional
 - Design
 - Technical
- Usability
- How Existing Code Works
- Programming Languages
- Development Environments
- Operating Environments
- Etc...



Why? Determine Schedule

Determine how long it will take to...

- ...learn the new programming language.
- ...learn the development environment.
- ...learn the existing code.
- ...convert the existing code.
- ...convert the existing database.
- ...get libraries working.
- ...deploy the application onto an iOS device.
- ...Etc....



Why? Identify Risks

- Operability
 - How do we make a game clock?
 - Where do we store the data?
- Interoperability
 - How does the game clock work with other tablets?
 - How do the tablets all write to the same database?
- Scalability
 - Will the game clock propagate in real time?
 - Will the database engine keep up?
- Reliability
 - What happens if the clock tablet dies?
 - What happens if the database tablet dies?
- Etc-Ability...



Speed (to Write)

- Critical
- 2-3 Day Tasks
- Use Whatever Works
 - RAD Languages
 - SDK's
 - IDE's
 - Design Tools
 - Wizards
 - Sample Code
 - Etc...
- Stop When Questions Answered



Tradeoffs: Speed (to Write) vs...

- Speed vs Best Practices
 - Testing
 - Documentation
 - Security
 - Software Engineering
 - Usability
 - Performance
 - Coding Standards
 - User Interface Standards
 - Using Real Data
 - Etc...
- Hence, May Not Be Appropriate in Final Deliverable

Challenge/Danger

- “Hack” Solution

- It works.
- It’s ***a*** way to do something.

vs

- “Correct” Solution

- It works.
- It’s the ***“right”*** way to do something.
(There may be more than one “right” way to do something.)

Often My Biggest
Frustration



Basketball Prototypes Case Studies

- Play Effectiveness
- Player Timer
- Radio Stats
- Real Time Play Stats
- Plus/Minus



Play Effectiveness App

- Functional Specifications
 - Determine Effectiveness of Plays
 - Record All Plays with Results
 - Produce Reports of Effectiveness
 - Each Play
 - # of Successes / # of Attempts
- Design Specifications?
- Technical Specifications?



Initial Meeting with Video Coordinator

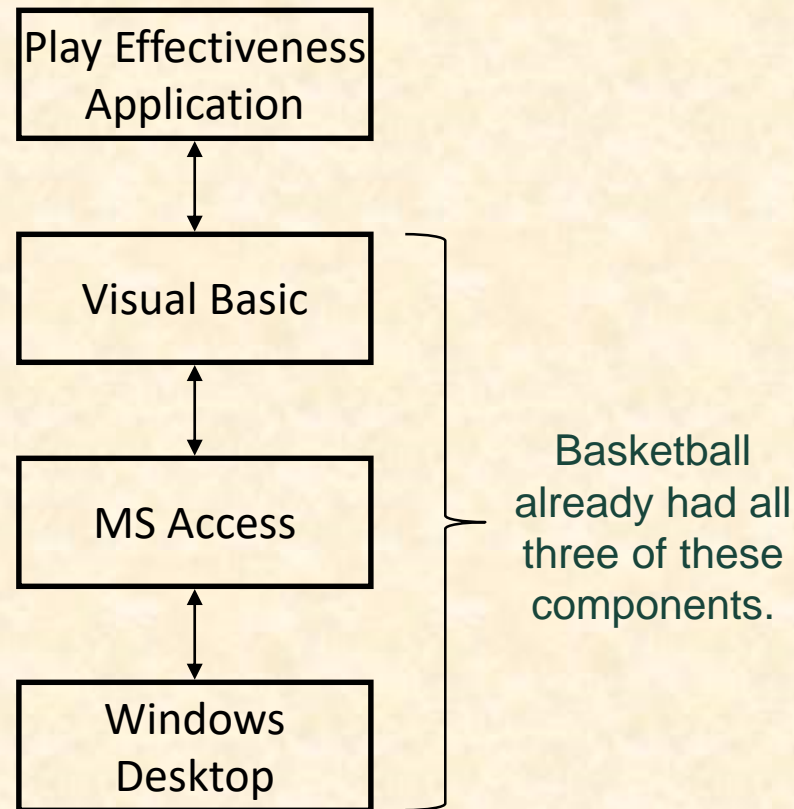
I Learned...

- Done After Game
 - On Desktop Computer
 - From DVR-Like App
- Lots of Plays (~ 200) in Play Book
- ~20-40 Plays Run Per Game
- Plays Categorized
 - Early Offense 1,2 (i.e., Fast Breaks)
 - Offense 1,2 (i.e., Half Court Plays)
 - Special Situations 1,2 (i.e., Out of Bounds)
- Overwhelming ← Can you relate?

The
Business
Processes



Play Effectiveness Architecture



Risks

- Learning Basketball Business Processes
- Programming in Visual Basic
 - Can this be done in VB?
 - ! Can I learn VB?
- Making a GUI in VB
- Interfacing VB with Access
 - Creating/Opening/Saving a Database
 - Reading/Writing Records
 - Traversing Records
- Generating Reports in Access
- Etc...



BB Stats Alpha V1

Detail

Game

Opponent	Harvard University	Location	Boston
Date	July 4, 1776	Number	1776070401

Play

P#	48
T	12:34
C#	426
EO1	Run
EO2	Gun
01	1-4 Screen
02	Low Post
SS1	SLOB
SS2	Blah
R	Two Pointer
Notes	Feed to Adams. Washington always gets the rebound. Jefferson or Hamilton should take the shot.

Roster

1	00:00	00:00	Adams, John
2	00:00	00:00	Jefferson, Tom
3	00:00	00:00	Washington, George
4	00:00	00:00	Franklin, Ben
5	00:00	00:00	Hamilton, Alex

Next Play

BB PE PV1

(Prototype Version 1)

Fields

- P# Play Number
- T Time
- C# Clip Number
- EO Early Offense
- O Offense
- SS Special Situations
- R Result

Nota Bene

- Just Screen Layout
- No Code (Underneath)
- Never Have All Entries Filled at Once



What I Learned From PV1

[1 of 2]

- Wanted to Identify Plays Within a Possession
- Plays Categorized Series / Set
 - Set is Variation on Series (“Parameterized Plays”)
 - E.g.
 - Series: Thumbs
 - Sets: Up, Down, Circle
 - Plays: Thumbs Up, Thumbs Down, Thumbs Circle
 - 1, 2 Notation
 - EO1 = Early Offense Series
 - EO2 = Early Offense Set
 - ST (Special Teams) Missing

Huge
Impact On
Design



What I Learned From PV1

[2 of 2]

- Results Coded
 - *XN* Missed *N* Pointer (X1, X2, X3)
 - *ON* Made *N* Pointer (O1, O2, O3)
 - *FF* Foul on the Floor
 - *TO* Time Out
 - Etc...
- Wanted to Record Notes on Defense
- Didn't Care About
 - Player Times
 - Video Clip Number (C#)



BB Stats Alpha V1

Detail

Game

Opponent	Harvard University	Location	Boston
Date	July 4, 1776	Number	1776070401

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P#	48
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C#	426
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EO2	Gun
O1	1-4 Screen
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1	00:00	00:00	Adams, John
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3	00:00	00:00	Washington, George
4	00:00	00:00	Franklin, Ben
5	00:00	00:00	Hamilton, Alex

Next Play

So, from this to...

BB PE PV1

Fields

- P# Play Number
- T Time
- C# Clip Number
- EO Early Offense
- O Offense
- SS Special Situations
- R Result

Nota Bene

- Just Screen Layout
- No Code (Underneath)
- Never Have All Entries Filled at Once



BB Stats Alpha V2

Detail

Play

T 12:34 PO# 12 PL# 17

	Series	Set
EO	Early Offense	Corner (Rescreen-Post)
OF	Zone Offense	Jersey - Side Ball Screen
ST	BLOB	Quick Post for Perimeter
SS	2 For 1	Blah Blah
R	O2	
DF	Man-to-Man	
Notes	Feed to Adams. Washington always gets the rebound. Jefferson or Hamilton should take the shot.	

Roster

1	Adams, John
2	Jefferson, Tom
3	Washington, George
4	Franklin, Ben
5	Hamilton, Alex

Commands

Insert Play Insert Possession

Clear Play

Save Play

Delete Play

Game

Opponent	Harvard University	Location	Boston
Date	July 4, 1776	Number	1776070401

BB PE PV2

Fields

- PO#
Possession Number
- PL#
Play Number
- SS
Special Situations
- DF
Defense

Nota Bene

- Just Screen Layout
- No Code (Underneath)
- Would **NOT** Have Entries in All Fields



What I Learned From PV2

- Wanted to Grade Effectiveness of Plays
- Wanted to Record Player Steals and Assists (Remember this...)
- Needed to Navigate Plays and Possessions
- Wanted to See Running Total Score



BB Stats Alpha V2

Detail

Play

T 12:34 PO# 12 PL# 17

	Series	Set
EO	Early Offense	Corner (Rescreen-Post)
OF	Zone Offense	Jersey - Side Ball Screen
ST	BLOB	Quick Post for Perimeter
SS	2 For 1	Blah Blah
R	O2	
DF	Man-to-Man	
Notes	Feed to Adams. Washington always gets the rebound. Jefferson or Hamilton should take the shot.	

Roster

1	Adams, John
2	Jefferson, Tom
3	Washington, George
4	Franklin, Ben
5	Hamilton, Alex

Commands

Insert Play Insert Possession

Clear Play

Save Play

Delete Play

Game

Opponent	Harvard University	Location	Boston
Date	July 4, 1776	Number	1776070401

So, from
this to...

BB PE PV2

Fields

- PO#
Possession Number
- PL#
Play Number
- SS
Special Situations
- DF
Defense

Nota Bene

- Just Screen Layout
- No Code (Underneath)
- Would **NOT** Have Entries in All Fields



Detail

Play

PE#	2	Time	12:34	PL#	17	MSU	37	Op	23
	Series			Set			Effectiveness		
EO	Early Offense			Corner (Rescreen-Post)			Great		
ST	BLOB			Quick Post for Perimeter			Poor		
OF	Zone Offense			Jersey - Side Ball Screen			So-So		
R	X			O			Outstanding		
DF	Man-to-Man			Something Else			Good		
SS	2 For 1			Blah Blah			Unreal		

Notes

Feed to Adams. Washington always gets the rebound. Jefferson or Hamilton should take the shot.

Game

Opponent	Harvard University	Location	Boston
Date	11/17/2003	Number	1776070401

Roster

P	Player	S	A
1	Unbound	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Jefferson, Tom	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Washington, George	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	Franklin, Ben	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	Hamilton, Alex	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Commands

Next Play	Next Possession
Previous Play	Previous Possession
Delete Play	Delete Possion
Exit	



What I Learned From PV3

- Wanted...
 - Grades to Be A, B, C, D, F
 - Results Associated With Players
 - Series/Set Combined
("Thumbs Up" Rather Than "Thumbs", "Up")
 - To Record Player Rebound
- Will be used by...
 - Video Coordinator, GAs, and Managers
 - Very Familiar with DVR Controls
- Did NOT Want to Record Player Steals or Assists



Detail

Play

PE#	2	Time	12:34	PL#	17	MSU	37	Op	23
	Series			Set			Effectiveness		
EO	Early Offense			Corner (Rescreen-Post)			Great		
ST	BLOB			Quick Post for Perimeter			Poor		
OF	Zone Offense			Jersey - Side Ball Screen			So-So		
R	X			O			Outstanding		
DF	Man-to-Man			Something Else			Good		
SS	2 For 1			Blah Blah			Unreal		

Notes

Feed to Adams. Washington always gets the rebound. Jefferson or Hamilton should take the shot.

So, from
this to...

Game

Opponent	Harvard University	Location	Boston
Date	11/17/2003	Number	1776070401

Roster

P	Player	S	A
1	Unbound	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Jefferson, Tom	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Washington, George	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	Franklin, Ben	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	Hamilton, Alex	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Commands

Next Play	Next Possession
Previous Play	Previous Possession
Delete Play	Delete Possion
Exit	



Season

Game

OpponentHarvardDateThursday, July 04, 1776

LocationBoston, MATime7:00 PM

VenueIvy League ChallengeTVNot Yet

⏮ ⏪ ⏩ ⏭ ⏮ ⏭

Game ID17760704

Possessions

Clock

Period1Possession0MSU0

Time20:00Play0Opponent0

Game ID17760704

Series / Set

Early Offense

Offense

Special TeamsBLOB, 3 Across

Special Situations

Offense ResultX3Offense GradeB

Defense

Defense ResultDefense Grade

Roster

ResultRebnd#Player

1Adams, John

2Jefferson, Tom

X33Washington, George

4Franklin, Ben

5Hamilton, Alex

ResultRebnd#Player

Notes

Possession Buttons

⏮ ⏪ ⏩ ⏭ ⏮ ⏭

Miscellaneous Buttons

⏮ ⏪ ⏩ ⏭ ⏮ ⏭

Play Buttons

⏮ ⏪ ⏩ ⏭ ⏮ ⏭

Record: 1 of 6 No Filter Search

BB PE AV1

(Alpha Version 1)

First Version
With Code

Not Much
Implemented



What I Learned From Alpha 1

- Entering a Play
 - Some Things Calculated Automatically
 - Play/Possession Number
 - Score
 - Most Things Entered With Mouse Via Pull-Down Menus
 - Series / Set
 - Result
 - But Time Entered With Keyboard Via Typing Numbers
- Need
 - Mouse-Only Input
 - Easy Way to Adjust Clock



Season

Game

Opponent: Harvard Date: Thursday, July 04, 1776

Location: Boston, MA Time: 7:00 PM

Venue: Ivy League Challenge TV: Not Yet

Game ID: 17760704

Possessions

Clock

Period: 1 Possession: 0 MSU: 0

Time: 20:00 Play: 0 Opponent: 0

Game ID 17760704

Series / Set

Early Offense: [Dropdown]

Offense: [Dropdown]

Special Teams: BLOB, 3 Across [Dropdown]

Special Situations: [Dropdown]

Offense Result: X3 [Dropdown] Offense Grade: B [Dropdown]

Defense: [Dropdown]

Defense Result: [Dropdown] Defense Grade: [Dropdown]

Roster

Result	Rebnd	#	Player
[Dropdown]	<input type="checkbox"/>	1	Adams, John [Dropdown]
[Dropdown]	<input type="checkbox"/>	2	Jefferson, Tom [Dropdown]
X3 [Dropdown]	<input type="checkbox"/>	3	Washington, George [Dropdown]
[Dropdown]	<input type="checkbox"/>	4	Franklin, Ben [Dropdown]
[Dropdown]	<input type="checkbox"/>	5	Hamilton, Alex [Dropdown]

Notes

Possession Buttons

[Previous] [Previous] [Next] [Next] [Next] [Next]

Play Buttons

[Previous] [Previous] [Next] [Next] [Next] [Next]

Miscellaneous Buttons

[Undo] [Eraser] [Sum] [Home] [Refresh] [Stop]

Record: 1 of 6 No Filter Search

BB PE AV1

(Alpha Version 1)

First Version
With Code

Not Much
Implemented

So, from
this to...



Season

Game

OpponentHarvardDateThursday, July 04, 1776

LocationBoston, MATime7:00 PM

VenueIvy League ChallengeTVNot Yet

Game ID17760704

Possessions

Clock

Period1Possession1MSU0Time18:07

Play1Opponent0

Series / Set

Early Offense

Offense1-4 Series, 1-4 Go

Special Teams

Special Situations

Offense ResultO2Offense Grade

Defense

Defense Result

Defense Grade

Roster

ResultRebnd#Player

1Adams, John

2Jefferson, Tom

O23Washington, George

4Franklin, Ben

5Hamilton, Alex

ResultRebnd#Player

Notes

Possession Buttons

Miscellaneous Buttons

Play Buttons

Game ID17760704

Record: 1 of 1

BB PE AV2

Still Not Much
Implemented



Season

Game

OpponentHarvardDateThursday, July 04, 1776

LocationBoston, MATime7:00 PM

VenueIvy League ChallengeTVNot Yet

Game ID17760704

Possessions

Clock

Period1Possession1MSU0Time18:07

Play1Opponent0

Series / Set

Early Offense

Offense1-4 Series, 1-4 Go

Special Teams

Special Situations

Offense ResultO2Offense Grade

Defense

Defense Result

Defense Grade

Roster

ResultRebnd#Player

1Adams, John

2Jefferson, Tom

O23Washington, George

4Franklin, Ben

5Hamilton, Alex

ResultRebnd#Player

Notes

Possession Buttons

Miscellaneous Buttons

Play Buttons

Game ID17760704

Record: 1 of 1

BB PE BV1

(Beta Version 1)



Basketball Prototypes Case Studies

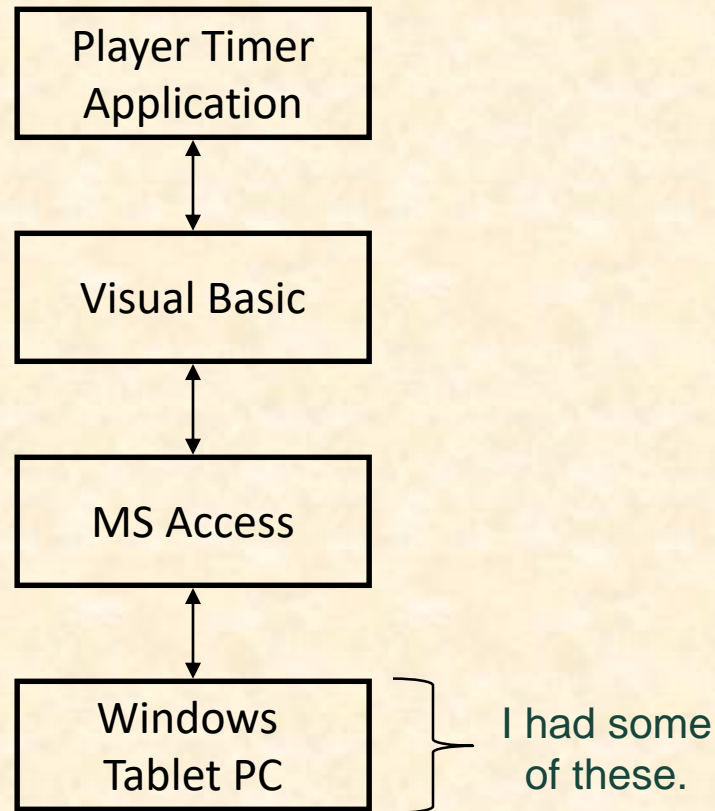
- ✓ Play Effectiveness
 - Player Timer
 - Radio Stats
 - Real Time Play Stats
 - Plus/Minus

Player Timer App

- Keep Track of Player Times
- For Each Player Record
 - Minutes Played
 - Game Clock Time
 - Consecutive & Total
 - Minutes Rested
 - Wall Clock Time
 - Consecutive
- Must
 - Be Usable on the Bench, During the Game
 - Be Portable and Not Require Electrical Outlet
 - Feel Like a Pen and a Clipboard



Player Timer App



Risks

- Learning Basketball Processes
- Implementing Clocks in Windows?
 - Game Clock
 - Wall Clock
- Very Limited Screen Real Estate
(Different Problem Than Mobile App)
- Computing and Displaying Cumulative Times
- Hidden Risk (“Danger Will Robinson!”)



Player Timer Development

- Knew Exactly What They Wanted, So...
 - Designed “Final” Version
 - User Interface
 - Data Base Schema
 - Etc...
 - Coded “Final” Version
 - Bench Tested “Final” Version
 - Field Tested “Final” Version
 - In Practice Scrimmage
 - Totally and Completely Unusable
 - Scrapped “Final” Version UI and Started Over
- Huge Mistake!



Player Timer - Spartan Basketball Stats

Home

Period: 1 Time: 16:19

Michigan State Spartans Men's Basketball

Start the Clock

	Select Player	Checked Out				Check Player In / Out	Checked In			
		Time		#	Player		#	Player	Time	
		Current	Remaining						Current	Remaining
<input checked="" type="checkbox"/>	1	1:12	1:48		←	3	Allen	0:04	3:56	
<input checked="" type="checkbox"/>	2	1:52	1:08	41	→			0:33	3:27	
<input checked="" type="checkbox"/>	3	0:00	3:00	23	→			0:00	4:00	
<input checked="" type="checkbox"/>	4	0:00	3:00		←	40	Herzog	3:07	0:53	
<input checked="" type="checkbox"/>	5	0:00	3:00	0	→			0:00	4:00	
<input checked="" type="checkbox"/>	6	0:27	2:33	1	→			3:37	0:24	
<input checked="" type="checkbox"/>	7	0:00	3:00	34	→			0:00	4:00	
<input checked="" type="checkbox"/>	8	0:00	3:00		←	2	Morgan	3:41	0:20	
<input checked="" type="checkbox"/>	9	0:00	3:00	10	→			0:00	4:00	
<input checked="" type="checkbox"/>	10	0:00	3:00		←	15	Summers	2:58	1:02	
<input checked="" type="checkbox"/>	11	0:00	3:00		←	14	Suton	3:41	0:20	
<input checked="" type="checkbox"/>	12	0:00	3:00	5	→			0:00	4:00	

Start the Clock

View Game Stats Check Out All Begin the Period End the Period

Load Roster Open Exit

Form View

Player Timer

Software Updates

- Enable Clock Adjustments (While Clock Stopped)
- Enable Check In/Out By Touching
 - Check In/Out Button
 - Player Name
 - Player Slot
- Allow > 5 Players Checked In (While Clock Stopped)
- Enable Pending Check In (While Clock Running)
- Eliminate All Modal Dialog Boxes



Basketball Prototypes Case Studies

- ✓ Play Effectiveness
- ✓ Player Timer
 - Radio Stats
 - Real Time Play Stats
 - Plus/Minus

Microsoft Access - [Bader's Radio Statistics]

File Edit View Insert Format Records Tools Window Help Type a question for help

Michigan State University		13	19 / 23	83%	22	5	78			
LR	SR	R	"--"	PF	O1	X1	%O1	O2	O3	Total
Brown, Shannon		3	0	4 / 4	100%	2	1	11		
<input checked="" type="checkbox"/> 1		R	PF	O1	X1	%O1	O2	O3	Total	
Hill, Chris		5	2	2 / 2	100%	0	0	2		
<input checked="" type="checkbox"/> 2		R	PF	O1	X1	%O1	O2	O3	Total	
Neitzel, Drew		12	2	1 / 2	50%	2	0	5		
<input checked="" type="checkbox"/> 3		R	PF	O1	X1	%O1	O2	O3	Total	
Ager, Maurice		13	3	2 / 3	67%	6	0	14		
<input checked="" type="checkbox"/> 4		R	PF	O1	X1	%O1	O2	O3	Total	
Anderson, Alan		15	4	2 / 2	100%	3	3	17		
<input checked="" type="checkbox"/> 5		R	PF	O1	X1	%O1	O2	O3	Total	
Torbert, Kelvin		23	5	0 / 0	-	2	1	7		
<input checked="" type="checkbox"/> 6		R	PF	O1	X1	%O1	O2	O3	Total	
Bograkos, Tim		30	0	0 / 0	-	0	0	0		
<input checked="" type="checkbox"/> 7		R	PF	O1	X1	%O1	O2	O3	Total	
Naymick, Drew		34	1	0 / 0	-	0	0	0		
<input checked="" type="checkbox"/> 8		R	PF	O1	X1	%O1	O2	O3	Total	
Davis, Paul		40	3	8 / 10	80%	6	0	20		
<input checked="" type="checkbox"/> 9		R	PF	O1	X1	%O1	O2	O3	Total	
Rowley, Delco		50	0	0 / 0	-	0	0	0		
<input checked="" type="checkbox"/> 10		R	PF	O1	X1	%O1	O2	O3	Total	
Ibok, Idong		0	0	0 / 0	-	0	0	0		
<input checked="" type="checkbox"/> 11		R	PF	O1	X1	%O1	O2	O3	Total	
Gray, Marquise		42	0	0 / 0	-	0	0	0		
<input checked="" type="checkbox"/> 12		R	PF	O1	X1	%O1	O2	O3	Total	

2

Period

78

MSU

68

Duke

19 / 23

83%

MSU

17 / 24

71%

Duke

13 PF

MSU

12 PF

Duke

Scoring Runs

Open

Exit

Duke		12	17 / 24	71%	15	7	68			
LR	SR	R	"--"	PF	O1	X1	%O1	O2	O3	Total
Redick, J.J.		4	0	2 / 2	100%	1	3	13		
<input checked="" type="checkbox"/> 1		R	PF	O1	X1	%O1	O2	O3	Total	
Ewing, Daniel		5	3	2 / 4	50%	5	2	18		
<input checked="" type="checkbox"/> 2		R	PF	O1	X1	%O1	O2	O3	Total	
Melchionni, Lee		13	1	2 / 2	100%	1	2	10		
<input checked="" type="checkbox"/> 3		R	PF	O1	X1	%O1	O2	O3	Total	
McClure, David		14	0	0 / 0	-	0	0	0		
<input checked="" type="checkbox"/> 4		R	PF	O1	X1	%O1	O2	O3	Total	
Dockery, Sean		15	3	0 / 0	-	0	0	0		
<input checked="" type="checkbox"/> 5		R	PF	O1	X1	%O1	O2	O3	Total	
Nelson, DeMarcus		21	2	2 / 4	50%	3	0	8		
<input checked="" type="checkbox"/> 6		R	PF	O1	X1	%O1	O2	O3	Total	
Williams, Shelden		23	5	9 / 10	90%	5	0	19		
<input checked="" type="checkbox"/> 7		R	PF	O1	X1	%O1	O2	O3	Total	
Love, Reggie		30	4	0 / 0	-	0	0	0		
<input checked="" type="checkbox"/> 8		R	PF	O1	X1	%O1	O2	O3	Total	
Perkins, Ross		40	0	0 / 0	-	0	0	0		
<input checked="" type="checkbox"/> 9		R	PF	O1	X1	%O1	O2	O3	Total	
Davidson, Patrick		41	0	0 / 0	-	0	0	0		
<input checked="" type="checkbox"/> 10		R	PF	O1	X1	%O1	O2	O3	Total	
Randolph, Shavlik		42	3	0 / 2	0%	0	0	0		
<input checked="" type="checkbox"/> 11		R	PF	O1	X1	%O1	O2	O3	Total	
Pagliuca, Joe		45	0	0 / 0	-	0	0	0		
<input checked="" type="checkbox"/> 12		R	PF	O1	X1	%O1	O2	O3	Total	

Form View

NUM

Play Stats - [frmSTATEPlays : Form]

File Edit Insert Records Window Help Type a question for help

MSU vs Purdue

All By Series, Set Print Show Print Reports 1/71

E O	QSO	O	CEH	MOP	ST	Z	OB	S S
No Series	No Set							
Break	Blitz							
Break	Break							
Early Offense	Carolina							
Early Offense	Early Post							
Early Offense	Reversal							
Early Offense	Rub							
ZZZ Early Offens	ZZZ EO 1							
ZZZ Early Offens	ZZZ EO 2							
ZZZ Early Offens	ZZZ EO 3							

Aerts

Ager

Brown

Davis

Gray

Hamo

Ibok

Maurice

Naymick

Neitzel

Rowley

Suton

Trannon

Walton

O2

--

O2

O3

O2F

O3F

X2

X3

X2F

X3F

O1

X1

FF

TO

A

B

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F

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Real Time Play Stats



Spartan Basketball Plus/Minus - Spartan Basketball Plus/Minus

Home

Period
Michigan State Spartans Men's Basketball
Time

2
Illinois
0:00

Start the Clock

Player Roster
Assign Player to Position
Players in Positions

1	1 Lucas	1	2	3	4	5	1	20 Kebler
2	34 Lucious	1	2	3	4	5	2	13 Thornton
3		1	2	3	4	5	3	22 Dahlman
4	2 Morgan	1	2	3	4	5	4	25 Crandell
5	3 Allen	1	2	3	4	5	5	40 Herzog
6	13 Thornton	1	2	3	4	5	Scoring	
7	15 Summers	1	2	3	4	5	Michigan State	
8	22 Dahlman	1	2	3	4	5	73	
9		1	2	3	4	5	01 02 03 ↺	
10	10 Roe	1	2	3	4	5	Start the Clock	
11	23 Green	1	2	3	4	5	Illinois	
12	40 Herzog	1	2	3	4	5	63	
13	41 Sherman	1	2	3	4	5	01 02 03 ↺	
14	50 Nix	1	2	3	4	5	Start the Clock	
15		1	2	3	4	5	Illinois	
16		1	2	3	4	5	63	
17	20 Kebler	1	2	3	4	5	01 02 03 ↺	
18	25 Crandell	1	2	3	4	5	Start the Clock	

Exit
Open Game
View Report
Reset Positions
Begin the Period
Load Roster

Plus/Minus



Risks and Prototypes

✓ Risk

✓ Prototypes

What's ahead?

[1 of 3]

- Team Photos
 - Informal
 - ~~After Meeting Tuesday: Teams Amazon – Michigan State University HPCC~~
 - After Meeting Today: Teams Michigan State University ITS – Volkswagen
 - Formal
 - After Each Project Plan Presentation
 - Dress code for presenting teams is business casual.
- Setup
 - Team Machines
 - Dell Server If Needed (Ask TAs)
 - Apple iMacs (with Windows 10 VM)
 - Team Software
 - Microsoft Office
 - ❖ Word and PowerPoint
 - ❖ Microsoft Windows Version
 - Web Server
 - Code Repository
 - SDK's
 - Etc.

Required.

Use Windows 10 VM.



What's ahead?

[2 of 3]

- All-Hands Meetings
- ~~01/08: Capstone Overview~~
- ~~01/10: Capstone Overview~~
 - ~~Project Plan~~
 - ~~Team Photos: Teams Amazon – Michigan State University HPCC~~
- ~~01/15: Risks and Prototypes~~
 - ~~Team Photos: Teams Michigan State University ITS – Volkswagen~~
- 01/17: Team Status Report Presentations
- 01/22: Schedule and Teamwork
- 01/24: Team Status Report Presentations
- 01/29: Team Project Plan Presentations
- 01/31: Team Project Plan Presentations
- 02/05: Team Project Plan Presentations
- 02/07: Team Project Plan Presentations



What's ahead?

[3 of 3]

- Team Status Report Presentations

- [PowerPoint Template](#)

- Due 12:01 a.m., Thursday, January 17
(Think Wednesday night.)

- Two Days

← Get on it now!

- Email to Dr. D.

- Subject: Team [Team Name]: Status Report Presentation
Subject: Team Auto-Owners: Status Report Presentation

- Attachment: team-[team-name]-status-report-presentation.pptx
Attachment: team-urban-science-status-report-presentation.pptx

- Dr. D. Will Combine Into Single PowerPoint

- To Speed Things Up During Meeting

- Do NOT Modify Master Slide

- Must Use Windows Version of Microsoft Office

- Each Team Presents

- Using Dr. D.'s Laptop

- [At Most 3.0 Minutes](#) (Rehearse Timing)

- Single or Multiple Presenters (Your Choice)





Status Report Presentation

Team [Team Name]

The Capstone Experience

Dr. Wayne Dyksen

Department of Computer Science and Engineering

Michigan State University

Spring 2019



*From Students...
...to Professionals*

Status Report Instructions

- Use the Microsoft Windows version of PowerPoint.
- Required Template
 - Do not edit the master slides.
 - Do not change the organization or number of slides.
 - Make your presentation fit within these four slides.
- Content
 - For the slide titles, replace [Team Name] with your company name as in “Team Auto-Owners” and [Project Title] by the project title posted online.
 - All presentations will be posted on the course web site so do not include company confidential information or anything that your client would not want posted.
 - Delete this slide from the presentation.
- Presenting
 - The order of the presentations during our meeting will be team numerical order.
 - The time limit for your presentation is 3 minutes, which will be strictly enforced. Practice your presentation to ensure that you will finish within the allotted time.
- Submission by Email ← **Read this carefully.**
 - All presentations are due via email to me and to your client by 12:01 a.m., Thursday, January 17. (Think Wednesday night.) Send your presentation to your client in a separate email; do not cc me.
 - For subject, use “Team [Team Name]: Status Report Presentation” as in “Team Urban Science: Status Report Presentation”.
 - Attach the PowerPoint source file named “team-[team-name]-status-report-presentation.pptx” as in team-auto-owners-status-report-presentation.pptx. Use all lower case and replace blanks by dashes in your filename.
 - Include some (professional) text in the body to avoid being sent to my junk folder.



Team [Team Name]

Status Report

[1 of 4]

[Project Title]

- Project Overview

- Description Point 1
- Description Point 2
- Description Point 3
- Description Point 4

- Project Plan Document

- Status Point 1
- Status Point 2
- Status Point 3
- Status Point 4

Include status information.

What's the status of your project plan document?

Have you started it?

How much have you written?

What percentage complete is it?

Delete this textbox and the brace to the left.



Team [Team Name]

Status Report

[2 of 4]

[Project Title]

- Server Systems / Software
 - Description &/or Status Point 1
 - Description &/or Status Point 2
 - Description &/or Status Point 3
- Development Systems / Software
 - Description &/or Status Point 1
 - Description &/or Status Point 2
 - Description &/or Status Point 3

Include status information.
Are all systems up and running?
Have you tested everything?
**Delete this textbox and the
brace to the left.**



Team [Team Name]

Status Report

[3 of 4]

[Project Title]

- Client Contact
 - Status Point 1
 - Status Point 2
- Team Meetings
 - Status Point 1
 - Status Point 2
- Team Organization
 - Description Point 1
 - Description Point 2

Include status information.

Have you talked with/met with your client?

Have you scheduled a weekly conference call? When?

Have you scheduled an in-person meeting? When?

How many times has your team met so far?

Have you scheduled team meetings? How often?

Delete this textbox and the brace to the left.



Team [Team Name]

Status Report

[4 of 4]

[Project Title]

Risks

- Risk 1
 - Description
 - Mitigation
- Risk 2
 - Description
 - Mitigation
- Risk 3
 - Description
 - Mitigation
- Risk 4
 - Description
 - Mitigation

