

CS/INFO 4154:

Analytics-driven Game Design

Class 37:

Polishing

Some slides from: Kelvin Jin `16, TA (2015), worked on *Thermo* (2014)
Brian Curless (University of Washington)

Mon

Wed

Fri

11/20

THANKSGIVING

THANKSGIVING



Newgrounds Release Report due 11:59pm

11/27

11/29

Kongregate Release 1

12/1

Kongregate Release 2

Kongregate Release 11/29-12/1

- Needs 15 levels
- No other new requirements
- CMS deadline = Friday, 12/1 at 10:10am
- May release in class 11/29 if you are ready
- Must release by end of class Friday, 12/1



Featured Games

[Past Features](#)[More](#)

Aground

davidmaletz



Midget Mager

ryogo



Kirigami

Under Judgment



BuzzKill

morningtoast



Witch N' Wiz

mhughson



Last Days of the Woods

RedblackSpade



Revenge of The Kid

danishgoel



Wondrous Lands

DLord2



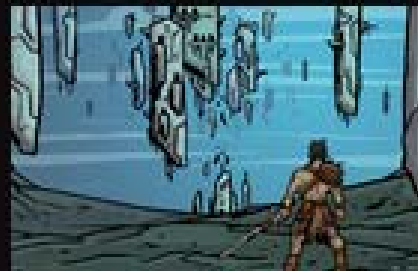
Zombidle

BerzerkStudio



Invader Overload

morningtoast



Crypt Shifter: Exile

KungFuSpaceBarbarian



Short and Sweet

sour-apple-studios



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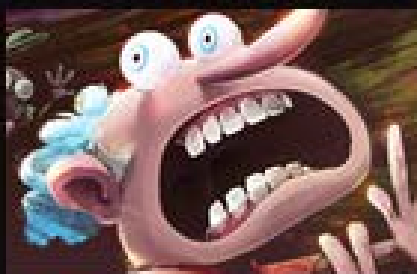
BuzzKill

morningtoast



Tower of Tune

ReidWade



PicNic Panic

Rodaiz



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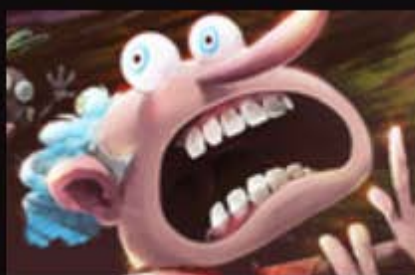
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The Zombie Food Truck

team-tzft



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sour-apple-studios


Email from Tom Fulp

Let's celebrate all these musical updates with a musical game!




[Tower of Tune](#)

(4.07 / 5.00, 132 votes and 3,282 views)


 P-Bot's Daily Picks [Comments](#)

1




Pmation: "Shock And Roll"
by **Pencilmation**
Movie | 486 Views | [IE](#)

2




Direkt
by **PaulDeVito**
Game | 1,044 Views | [IE](#)

3




Kirigami
by **lidavidm**
Game | 4,612 Views | [IE](#)

4




Puppet Regime Demo Reel
by **GruntVonVeizatun**
Movie | 327 Views | [T](#)


5



That Time I Smashed My C...
by **philipkbrayne**
Movie | 381 Views | [IE](#)


 P-Bot's Daily Picks [Comments](#)

1




Tower of Tune
by **ReidWade**
Game | 3,428 Views | [IE](#)

2




Arc Shield
by **aliciabunzhou**
Game | 1,888 Views | [IE](#)

3




Sticks (Animatic)
by **EvanClifford**
Movie | 291 Views | [T](#)

4



Burrito Bash!
by **Stratus-Games**
Game | 616 Views | [IE](#)

5



Outfoxed!
by **aliu139**
Game | 1,624 Views | [IE](#)

Best New Games & Movies!



Platformaniac

by TesseractGames

Game | 737 Views | [E](#)



A Date With APretentious ...

by OisinBuckley

Movie | 274 Views | [T](#)



Outfoxed!

by aliu139

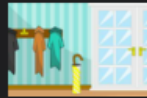
Game | 1,301 Views | [E](#)



EscarGO!

by nteo96

Game | 727 Views | [E](#)



Tricky House Escape

by selfdefiant

Game | 937 Views | [E](#)



Krystal Dress Doll

by keyfox

Game | 594 Views | [M](#)



Permafrost

by kat86

Game | 385 Views | [E](#)



The Zombie Food Truck

by team-tzft

Game | 1,287 Views | [T](#)



Arc Shield

by aliciabunzhou

Game | 706 Views | [E](#)



Unaired Nick Jr Commerci...

by FleckMyLife

Movie | 177 Views | [E](#)



Sticks

by EvanClifford

Movie | 160 Views | [T](#)



Burrito Bash!

by Stratus-Games

Game | 292 Views | [E](#)



Popular Games

[More](#)

The Zombie Food Truck



Kirigami



Tower of Tune



Direkt



Arc Shield



Outfoxed!



Tricky House Escape



Krystal Dress Doll



International Support



2017年11月19日

ゾンビのフードトラックお仕事ゲーム **The Zombie Food Truck**

ゾンビがフードトラックで働くお仕事シミュレーションゲーム。(WebGL)
来店したお客さんの元へゾンビを移動させ、お客さんからオーダーを取る⇒トラック内の調理器でバーガーなどの料理を作る⇒出来上がった料理をお客さんに運ぶと売上になります。
料理を出すたびにゾンビのエネルギーが減少し、エネルギーはお客さんを食べて左側のマットへ運びクリーニングすると回復。
左上タイマーが1周し、右上の売上目標を達成するとクリアとなります。
終了後は手に入れた報酬で各種アップグレードを購入できます。
(情報:名無しさん)



[このゲームはこちら](#)
[またはこちら](#)

Author:
[team-1zft](#)

【開始方法】

ロード終了後、NEW GAME⇒Continue⇒チュートリアルから開始
(次回はCONTINUEで続きから)

※WebGL対応のブラウザが必要

【フードメニュー】

ハンバーガー：中央のコロで焼く
フライドポテト：右上の台でポテトを切り、横のフライヤーへ。
ドリンク：左上で氷を取ってドリンクマシンに入れて注ぐ

【アップグレード】

Tier Upgrade

- Food Preparation Speed : 調理スピードアップ
- Customer Patience : お客さんの忍耐カアップ
- Body Cleaning Speed : クリーニングスピードアップ

Permanent Upgrades

- Add a new stove : バーガー調理器追加
- Add a cleaning mat : クリーニングマット追加
- Add a new Fryer : ポテトのフライヤー追加
- Increase Ice Capacity : ドリンクマシンの氷ストック量アップ
- Add a new drink machine : ドリンクマシン追加

【操作】

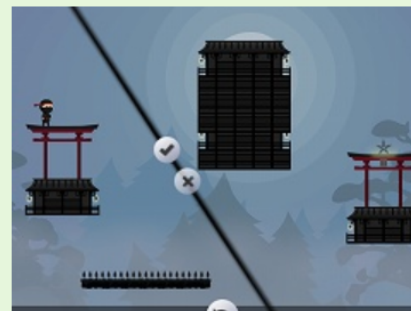
[W][A][S][D] or 方向キー : 移動
[Space] : オーダーを取る。調理する。料理を運ぶ。クリーニング
[E] : お客さんを食べる



2017年11月20日

忍者の空間切断アクションパズル **Kirigami**

空間を切断して移動させる能力を持つ忍者のアクションパズルゲーム。
主人公の忍者キャラを操作し、手裏剣を取るのが目標です。
ステージ内の何も無い場所をクリックし、そのままドラッグしてラインを引いて指を離すと空間が切断されます。(切断中は時間が停止)
切断された空間はドラッグしてスライド移動させることができ、適切な位置まで動かしたらDONEボタンで決定して続行。(キャンセルは×ボタン)
床や建物などは切断したり画面外へ移動させることはできません。
規定のカット回数(PAR)以内でクリアすると☆がつきます。
(情報:名無しさん)



[このゲームはこちら](#)

Author:
[lidavidm](#)

【開始方法】

ロード終了後、PLAY⇒レベル選択⇒チュートリアルから開始
※IE以外のブラウザが必要

【操作】

ドラッグ：空間の切断、スライド移動

[A][D] or [←][→] : キャラの左右移動

[W] or [↑] or [Space] : ジャンプ

[R] : リスタート

※アンドウはショートカットキーがないので画面下のボタンで

International Support

- “Simulation game in which a zombie works at a food truck.”



2017年11月19日

ゾンビのフードトラックお仕事ゲーム **The Zombie Food Truck**

ゾンビがフードトラックで働くお仕事シミュレーションゲーム。(WebGL)
来店したお客さんの元へとゾンビを移動させ、お客さんからオーダーを取る⇒トラック内の調理器でバーガーなどの料理を作る⇒出来上がった料理をお客さんに運ぶと売上になります。

料理を出すたびにゾンビのエネルギーゲージが減少し、エネルギーはお客さんを食べて左側のマットへ運びクリーニングすると回復。

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終了後は手に入れた報酬で各種アップグレードを購入できます。

(情報:名無しさん)



[このゲームはこちら](#)
[またはこちら](#)

Author:
[team-tzft](#)

International Support

“[Directions]

[E]: Eat a customer

I laughed just from this.”

21. Posted by 名無しさん 2017年11月19日 19:03

【操作】

[E]: お客さんを食べる

これだけで笑った

What is game polish?

- Hard to define objectively

What is game polish?

"Polish is often adding things nobody will ever notice, comment on, or appreciate, but will notice, comment on and appreciate when they aren't there."

- Frank Kowalkowski, Alpha Protocol

What is game polish?

“Polish, to me, is the last 10 to 20 percent of effort where everything in the game is now working and you take the time to focus on the little details that have a big impact on the overall quality of the game. [...] Polish is extremely important, as it has the ability to take a good game and make it great.”

- Rod Fergusson, Gears of War 2

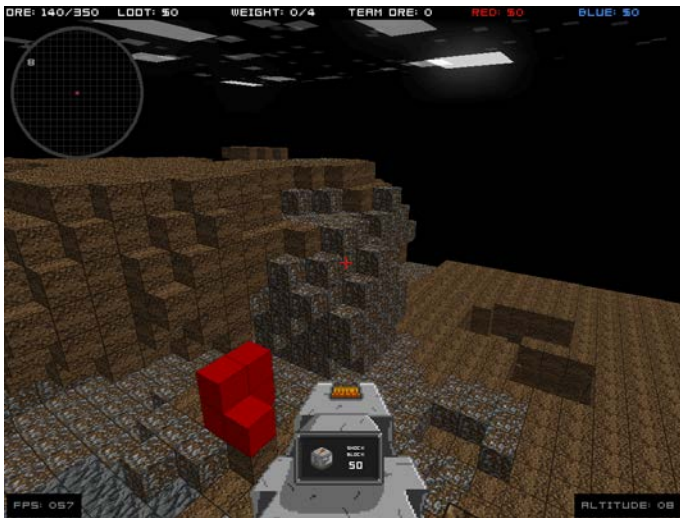
Polish is small details that:

- Are added intentionally
- Have minimal impact on the core mechanics
- Enhance the gameplay experience
- Are story, animations, sound effects, visual effects

Why is polish important?

- Makes games seem more fun than they really are
- Adds cohesiveness to the theme of your game
- Presentation can make a big difference

Importance of Presentation



Infiniminer



Minecraft

Importance of Presentation



Crush the Castle



Angry Birds

Twelve Basic Principles of Animation

Developed by Disney's Ollie Johnston & Frank Thomas:

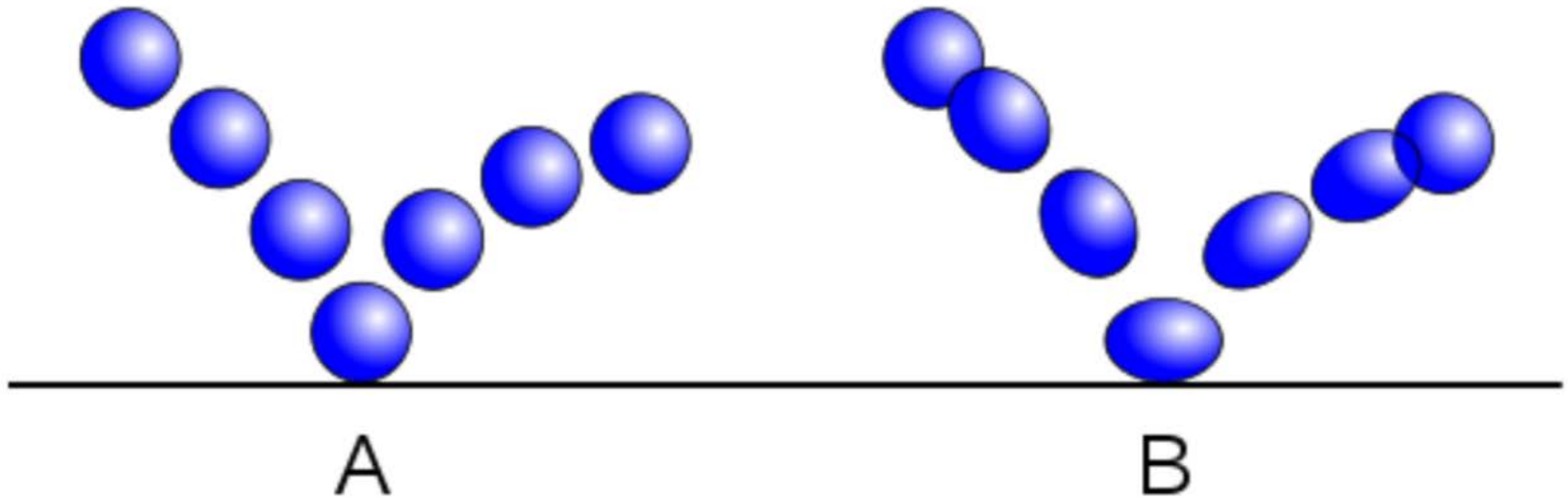
1. Squash and Stretch
2. Anticipation
3. Staging
4. Straight Ahead Action and Pose-to-Pose
5. Follow Through and Overlapping Action
6. Slow In and Slow Out
7. Arc
8. Secondary Action
9. Timing
10. Exaggeration
11. Solid Drawing
12. Appeal

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1. Squash and Stretch



- **Squash:** flatten an object or character by pressure or by its own power.
- **Stretch:** used to increase the sense of speed and emphasize the squash by contrast.
- Note: keep volume constant!

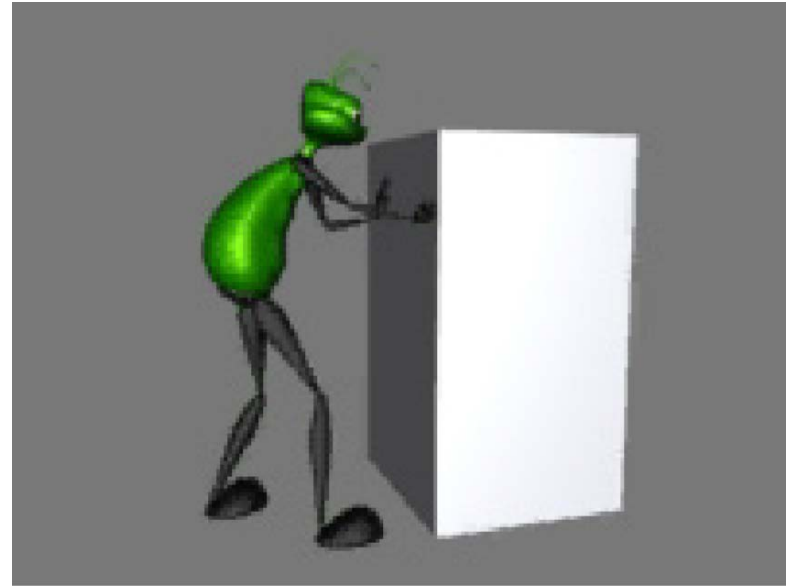
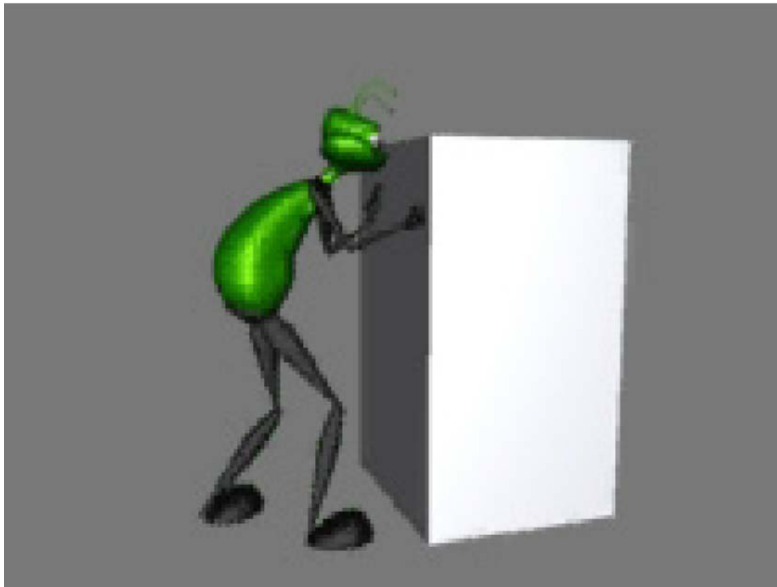
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2. Anticipation

- An action has three parts: anticipation, action, reaction.
- Anatomical motivation: a muscle must extend before it can contract.
- Prepares audience for action so they know what to expect.
- Directs audience's attention.



Which is heavier?

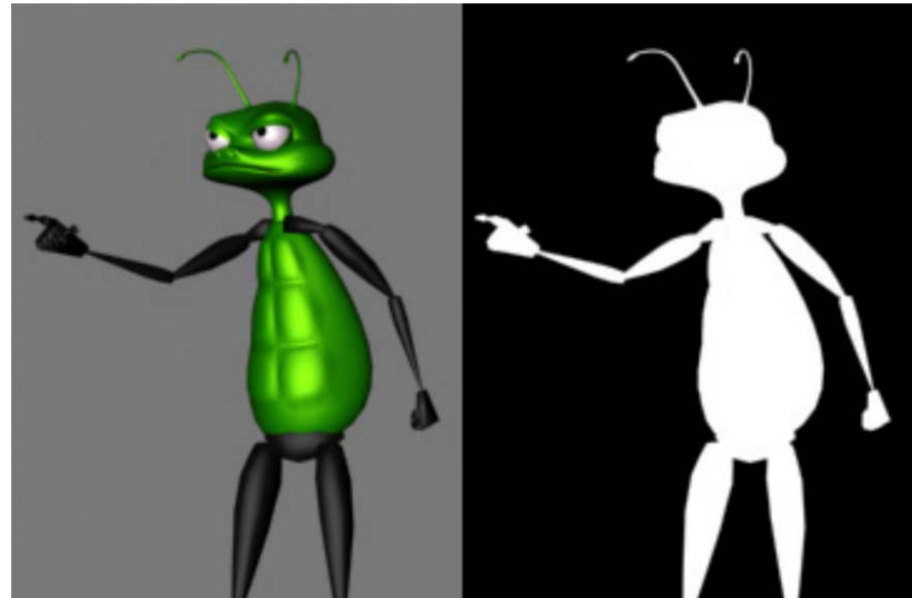
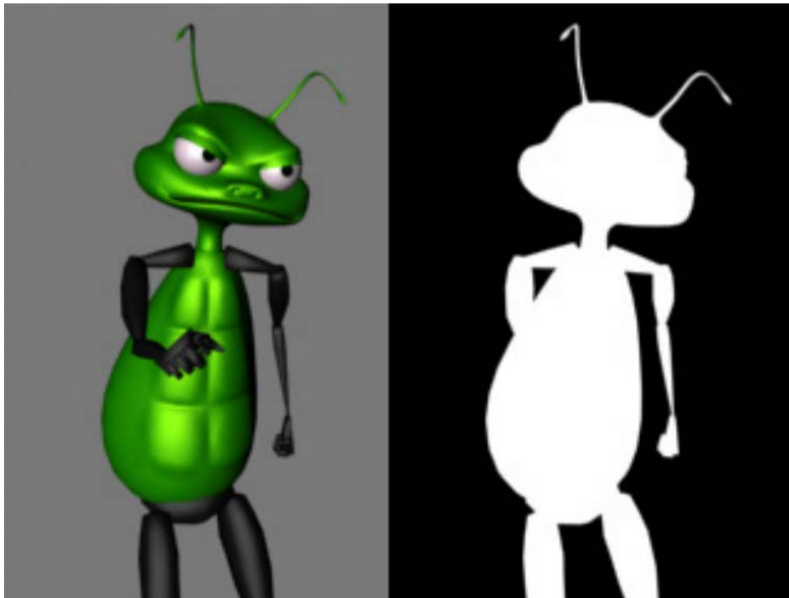
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3. Staging

- Present the idea so it is unmistakably clear.
- Audience can only see one thing at a time.
- Useful guide: stage actions in silhouette.



Which action is clearer?

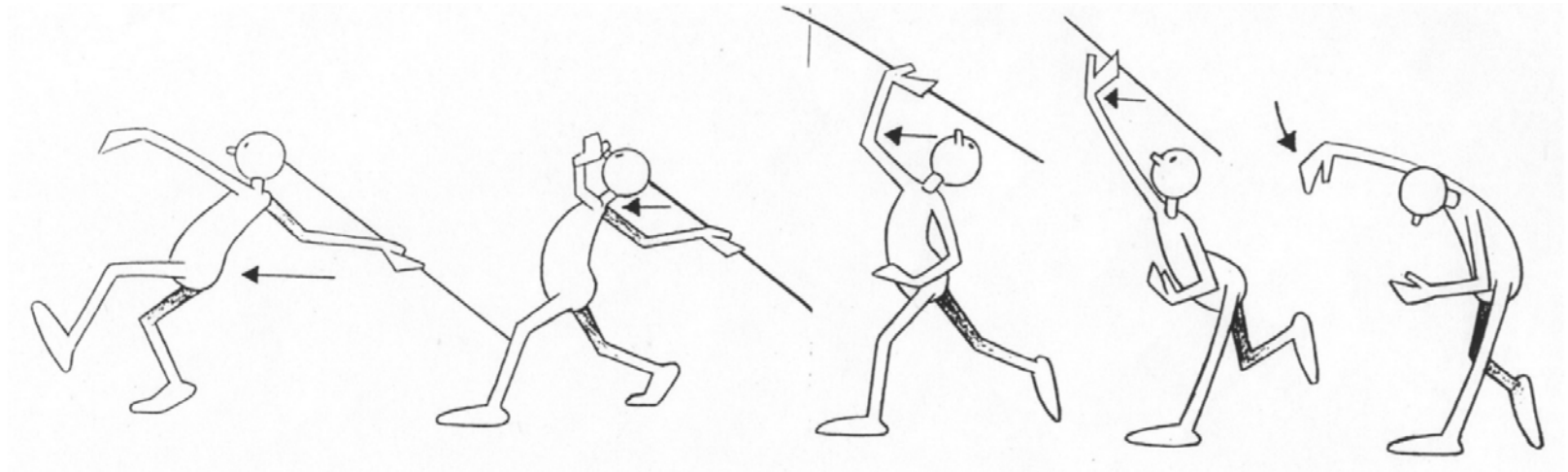
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5. Follow Through and Overlapping Action

- Actions seldom come to an abrupt stop.
- Physical motivation: inertia



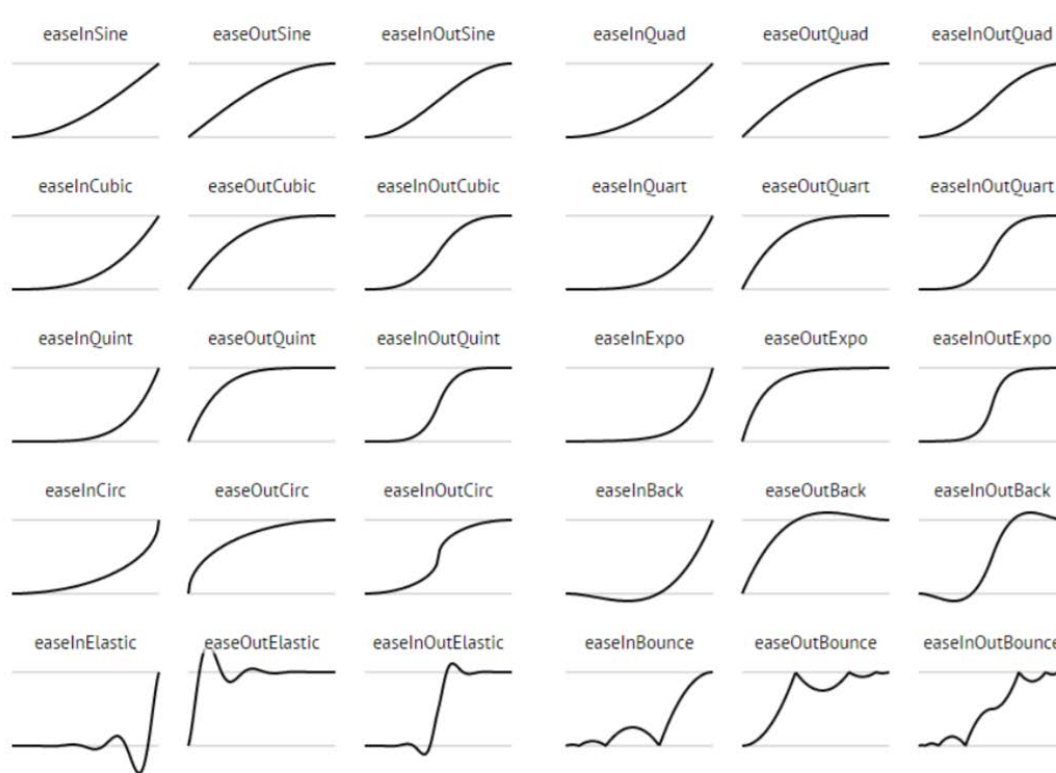
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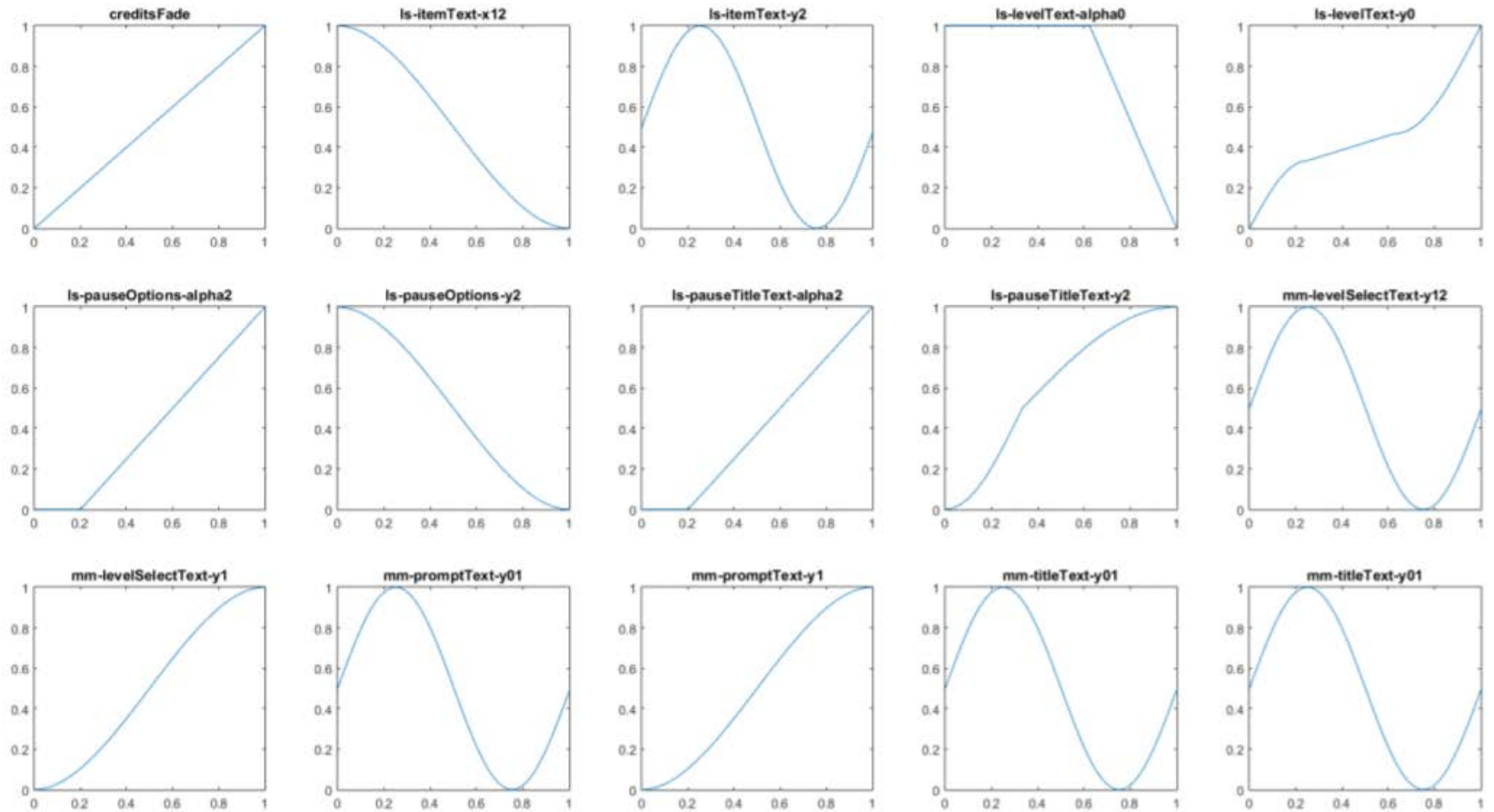
6. Slow In and Slow Out, 9. Timing

- Technique: **Easing**
- Replace linear interpolation with more interesting movement patterns
- Makes movement feel more natural/stylized
- <http://sol.gfxile.net/interpolation/>



From easings.net

Easing in *Thermo*



Thermo Demo



Twelve Basic Principles of Animation

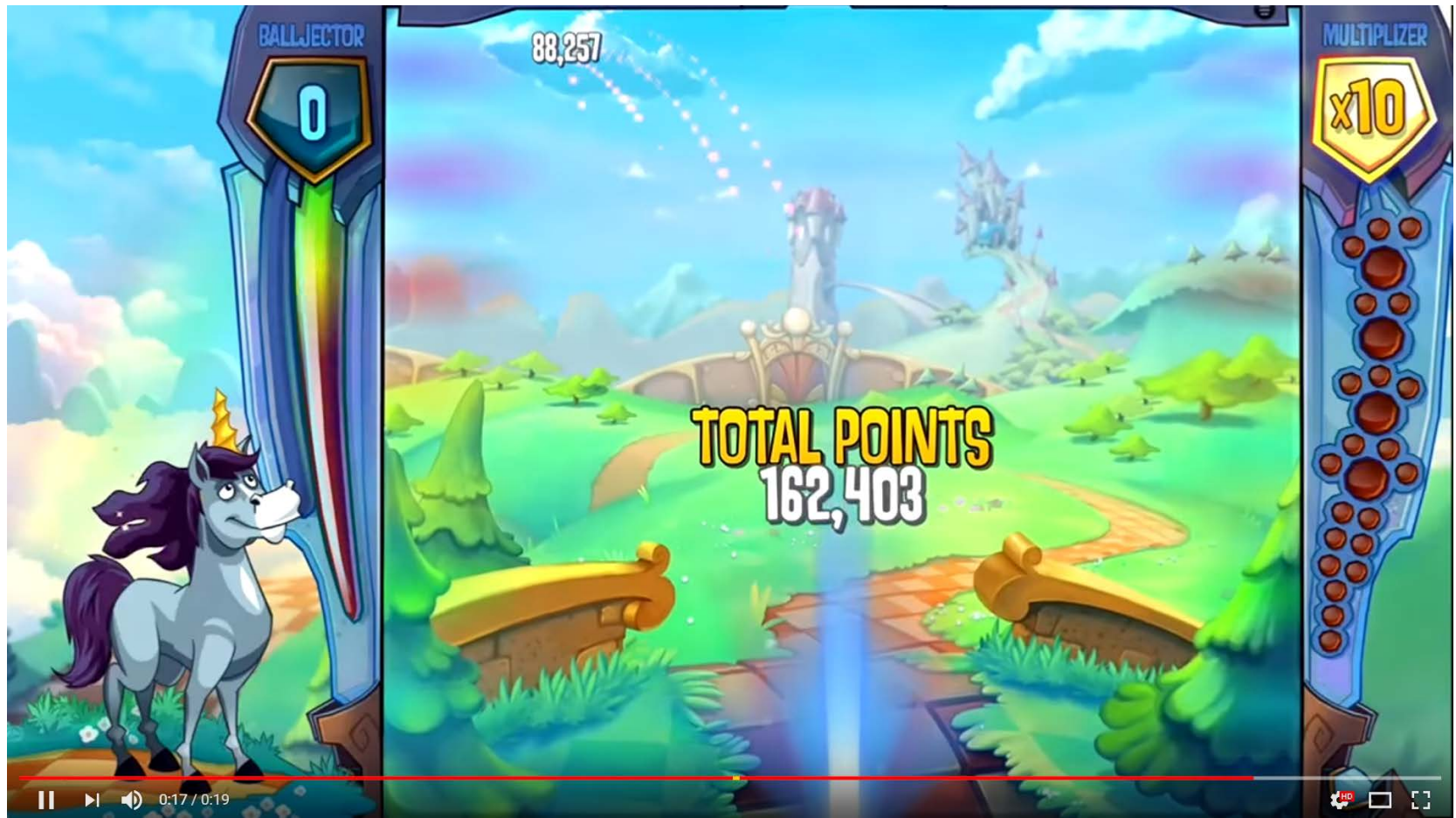
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- 10. Exaggeration**
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10. Exaggeration

- Bring out characteristics about your character or your world by exaggerating them

Exaggeration



Exaggeration



Activity: *Aground* Polish



Activity: *Aground* Polish

- With your group, play *Aground*
- How does this game make you *feel*?
- Identify five things you would consider “polish”
 - intentionally placed in the game to make it “feel” better, but minimal impact on core gameplay
- What can you learn for your own games?

Conclusion

- Polishing your game helps it stand out from the rest!
 - Esp. if your game mechanics are fairly simple
- Think of it not just as a game, but as an experience
 - Be in control of both visual and aural details