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# EXPLICACIÓN DEL JUEGO

El juego consiste en dar con las respuestas correctas en cada una de las preguntas o completar correctamente las canciones. Con cada respuesta correcta, se avanza y llega al tesoro, cada respuesta lleva a un camino diferente y por tanto, a un final diferente (en la mayoría de los casos).

Las preguntas son correspondientes a una película de Disney y se van dando conexiones entre películas hasta dar con la última respuesta, todo relacionado entre sí.





# IMPLEMENTACIÓN DEL AUTÓMATA.

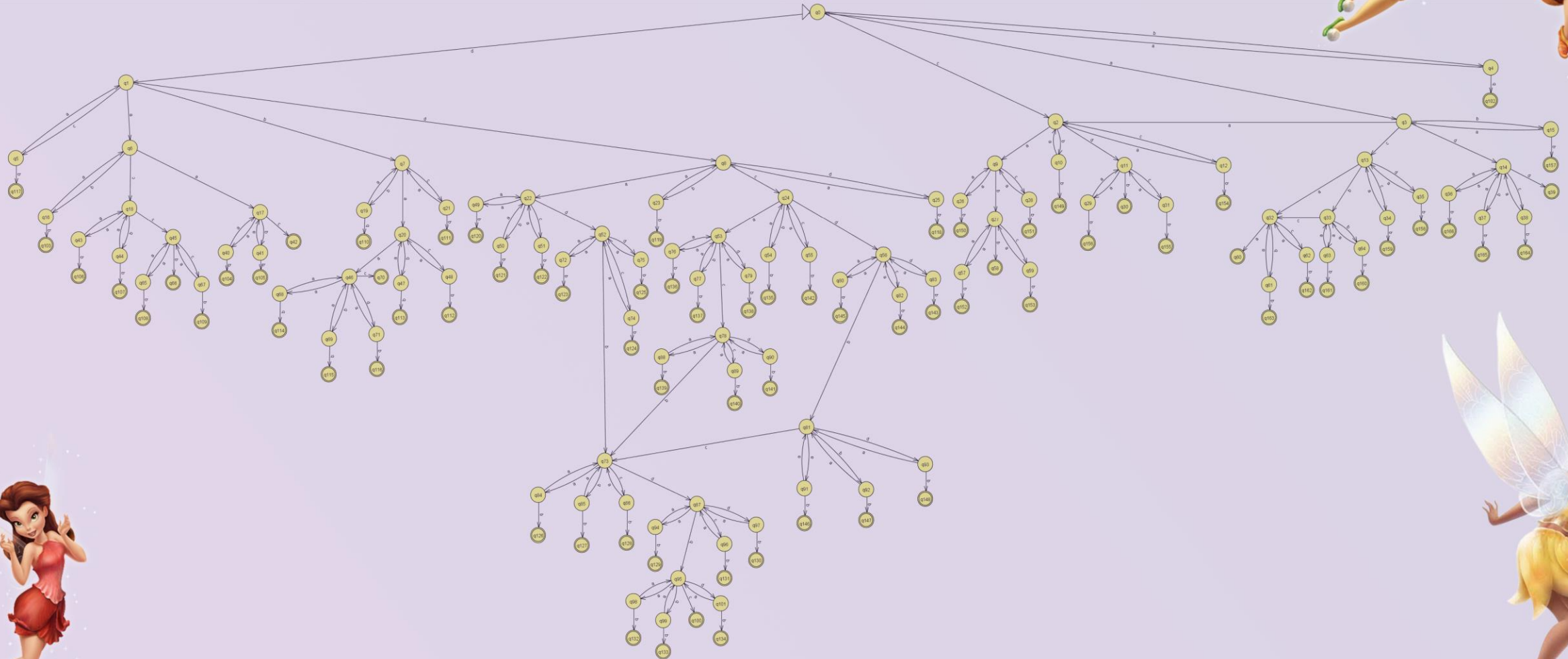
Se implementa con un AFD (autómata finito determinista) en el que cada estado valida una respuesta a su respectiva pregunta y abre un camino u otro dependiendo de si es correcta o no.



Existe un único estado inicial, una pregunta que conecta con otras y van abriendo el camino con el que se espera llegar a un estado de aceptación que bien puede ser el final; un personaje de Disney determinado. O la pérdida del juego por los errores cometidos.



# DIAGRAMA DE ESTADOS







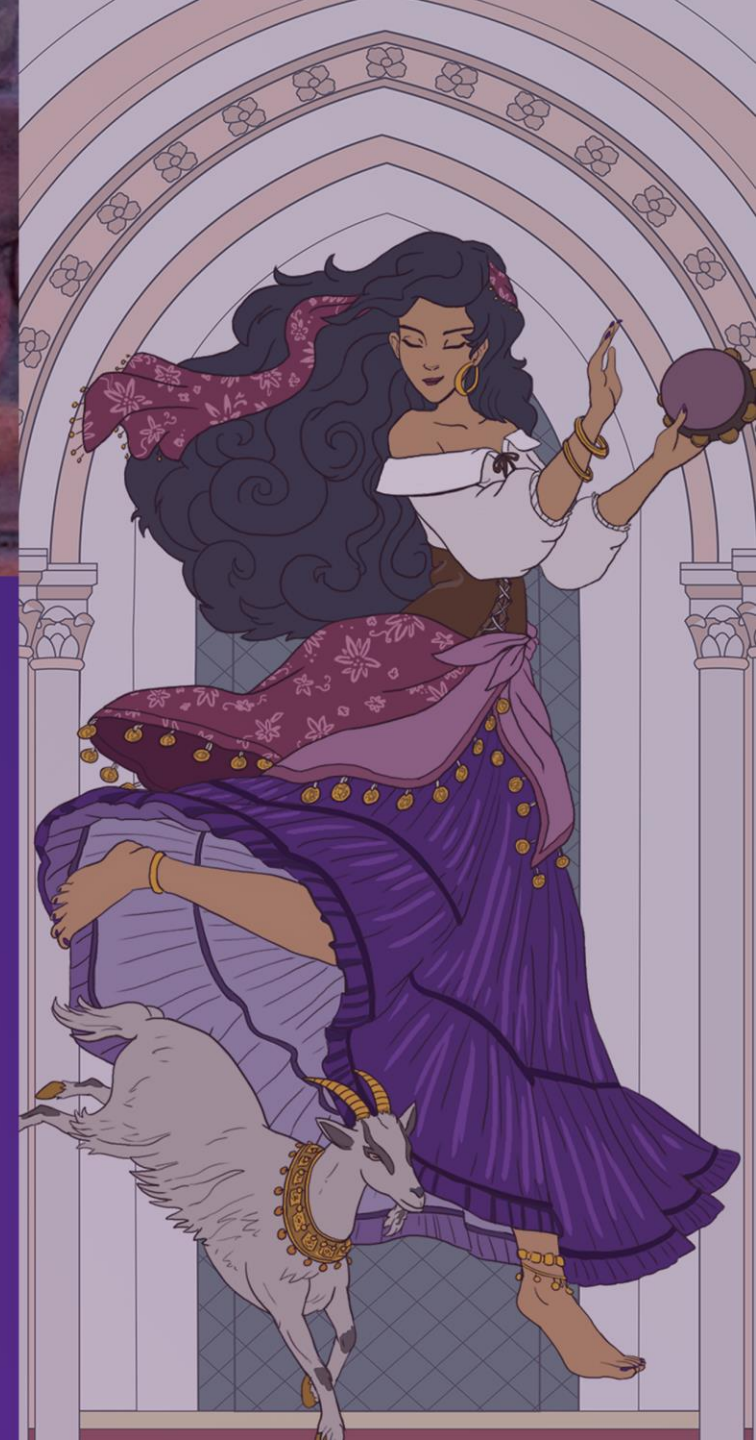
## ESTADO DEL ARTE

En los proyectos ya presentados en semestres anteriores se presentan juegos parecidos pero tomando como referencia el famoso juego de akinator en los que básicamente, se busca adivinar el personaje.

¿En qué se diferencia?

El juego de búsqueda del tesoro tiene como objetivo que sea el jugador quién encuentre el camino a su personaje de acuerdo a sus conocimientos sobre las películas de Disney.

Además, dejamos el “falso y verdadero” de los otros juegos y lo convertimos en preguntas de selección múltiple.



$A = (Q, \Sigma, \delta, q_0, F)$

$Q = \{q_0, q_1, q_2, q_3, q_4, q_5, q_6, q_7, q_8, q_9, q_{10}, q_{11}, q_{12}, q_{13}, q_{14}, q_{15}, q_{16}, q_{17}, q_{18}, q_{19}, q_{20}, q_{21}, q_{22}, q_{23}, q_{24}, q_{25}, q_{26}, q_{27}, q_{28}, q_{29}, q_{30}, q_{31}, q_{32}, q_{33}, q_{34}, q_{35}, q_{36}, q_{37}, q_{38}, q_{39}, q_{40}, q_{41}, q_{42}, q_{43}, q_{44}, q_{45}, q_{46}, q_{47}, q_{48}, q_{49}, q_{50}, q_{51}, q_{52}, q_{53}, q_{54}, q_{55}, q_{56}, q_{57}, q_{58}, q_{59}, q_{60}, q_{61}, q_{62}, q_{63}, q_{64}, q_{65}, q_{66}, q_{67}, q_{68}, q_{69}, q_{70}, q_{71}, q_{72}, q_{73}, q_{74}, q_{75}, q_{76}, q_{77}, q_{78}, q_{79}, q_{80}, q_{81}, q_{82}, q_{83}, q_{84}, q_{85}, q_{86}, q_{87}, q_{88}, q_{89}, q_{90}, q_{100}, q_{101}, q_{102}, q_{103}, q_{104}, q_{105}, q_{106}, q_{107}, q_{108}, q_{109}, q_{110}, q_{111}, q_{112}, q_{113}, q_{114}, q_{115}, q_{116}, q_{117}, q_{118}, q_{119}, q_{120}, q_{121}, q_{122}, q_{123}, q_{124}, q_{125}, q_{126}, q_{127}, q_{128}, q_{129}, q_{130}, q_{131}, q_{132}, q_{133}, q_{134}, q_{135}, q_{136}, q_{137}, q_{138}, q_{139}, q_{140}, q_{141}, q_{142}, q_{143}, q_{144}, q_{145}, q_{146}, q_{147}, q_{148}, q_{149}, q_{150}, q_{151}, q_{152}, q_{153}, q_{154}, q_{155}, q_{156}, q_{157}, q_{158}, q_{159}, q_{160}, q_{161}, q_{162}, q_{163}, q_{164}, q_{165}, q_{166}\}$

$\Sigma = \{a, b, c, d\}$

$q_0 = q_0$

$F = \{q_{30}, q_{39}, q_{42}, q_{58}, q_{60}, q_{66}, q_{70}, q_{100}, q_{101}, q_{102}, q_{103}, q_{104}, q_{105}, q_{106}, q_{107}, q_{108}, q_{109}, q_{110}, q_{111}, q_{112}, q_{113}, q_{114}, q_{115}, q_{116}, q_{117}, q_{118}, q_{119}, q_{120}, q_{121}, q_{122}, q_{123}, q_{124}, q_{125}, q_{126}, q_{127}, q_{128}, q_{129}, q_{130}, q_{131}, q_{132}, q_{133}, q_{134}, q_{135}, q_{136}, q_{137}, q_{138}, q_{139}, q_{140}, q_{141}, q_{142}, q_{143}, q_{144}, q_{145}, q_{146}, q_{147}, q_{148}, q_{149}, q_{150}, q_{151}, q_{152}, q_{153}, q_{154}, q_{155}, q_{156}, q_{157}, q_{158}, q_{159}, q_{160}, q_{161}, q_{162}, q_{163}, q_{164}, q_{165}, q_{166}\}$

# DEFINICIÓN FORMAL





# TRANSICIONES

• $\delta(q_0, a) = q_3$	• $\delta(q_6, a) = q_{17}$	• $\delta(q_{13}, a) = q_{32}$	• $\delta(q_{20}, a) = q_{46}$	• $\delta(q_{27}, b) = q_{47}$	• $\delta(q_{37}, a) = q_{14}$
• $\delta(q_0, b) = q_4$	• $\delta(q_6, b) = q_{16}$	• $\delta(q_{13}, b) = q_{33}$	• $\delta(q_{20}, b) = q_{47}$	• $\delta(q_{27}, c) = q_{48}$	• $\delta(q_{37}, b) = q_{165}$
• $\delta(q_0, c) = q_2$	• $\delta(q_6, c) = q_{18}$	• $\delta(q_{13}, c) = q_{34}$	• $\delta(q_{20}, c) = q_{48}$	• $\delta(q_{28}, a) = q_{11}$	• $\delta(q_{38}, a) = q_{14}$
• $\delta(q_0, d) = q_1$	• $\delta(q_7, a) = q_{20}$	• $\delta(q_{13}, d) = q_{35}$	• $\delta(q_{21}, a) = q_7$	• $\delta(q_{28}, b) = q_{151}$	• $\delta(q_{38}, b) = q_{164}$
• $\delta(q_1, a) = q_6$	• $\delta(q_7, b) = q_{19}$	• $\delta(q_{14}, a) = q_{36}$	• $\delta(q_{21}, b) = q_{111}$	• $\delta(q_{29}, a) = q_{11}$	• $\delta(q_{40}, a) = q_{17}$
• $\delta(q_1, b) = q_7$	• $\delta(q_7, c) = q_{21}$	• $\delta(q_{14}, b) = q_{37}$	• $\delta(q_{22}, a) = q_{49}$	• $\delta(q_{29}, b) = q_{156}$	• $\delta(q_{40}, b) = q_{104}$
• $\delta(q_1, c) = q_5$	• $\delta(q_8, a) = q_{22}$	• $\delta(q_{14}, c) = q_{38}$	• $\delta(q_{22}, b) = q_{50}$	• $\delta(q_{31}, a) = q_{11}$	• $\delta(q_{41}, a) = q_{17}$
• $\delta(q_1, d) = q_8$	• $\delta(q_8, b) = q_{23}$	• $\delta(q_{14}, d) = q_{39}$	• $\delta(q_{22}, c) = q_{51}$	• $\delta(q_{31}, b) = q_{155}$	• $\delta(q_{41}, b) = q_{105}$
• $\delta(q_2, a) = q_9$	• $\delta(q_8, c) = q_{24}$	• $\delta(q_{15}, a) = q_3$	• $\delta(q_{22}, d) = q_{52}$	• $\delta(q_{32}, a) = q_{60}$	• $\delta(q_{43}, a) = q_{18}$
• $\delta(q_2, b) = q_{10}$	• $\delta(q_8, d) = q_{25}$	• $\delta(q_{15}, b) = q_{157}$	• $\delta(q_{23}, a) = q_8$	• $\delta(q_{32}, b) = q_{61}$	• $\delta(q_{43}, b) = q_{106}$
• $\delta(q_2, c) = q_{12}$	• $\delta(q_9, a) = q_{26}$	• $\delta(q_{16}, a) = q_6$	• $\delta(q_{23}, b) = q_{119}$	• $\delta(q_{32}, c) = q_{62}$	• $\delta(q_{44}, a) = q_{18}$
• $\delta(q_2, d) = q_{11}$	• $\delta(q_9, b) = q_{27}$	• $\delta(q_{16}, b) = q_{103}$	• $\delta(q_{24}, a) = q_{53}$	• $\delta(q_{33}, a) = q_{63}$	• $\delta(q_{44}, b) = q_{107}$
• $\delta(q_3, a) = q_2$	• $\delta(q_9, c) = q_{28}$	• $\delta(q_{17}, a) = q_{40}$	• $\delta(q_{24}, b) = q_{54}$	• $\delta(q_{33}, b) = q_{64}$	• $\delta(q_{45}, a) = q_{65}$
• $\delta(q_3, b) = q_{15}$	• $\delta(q_{10}, a) = q_2$	• $\delta(q_{17}, b) = q_{41}$	• $\delta(q_{24}, c) = q_{55}$	• $\delta(q_{33}, c) = q_{32}$	• $\delta(q_{45}, b) = q_{66}$
• $\delta(q_3, c) = q_{13}$	• $\delta(q_{10}, b) = q_{149}$	• $\delta(q_{17}, c) = q_{42}$	• $\delta(q_{24}, d) = q_{56}$	• $\delta(q_{34}, a) = q_{13}$	• $\delta(q_{45}, c) = q_{67}$
• $\delta(q_3, d) = q_{14}$	• $\delta(q_{11}, a) = q_{29}$	• $\delta(q_{18}, a) = q_{43}$	• $\delta(q_{25}, a) = q_8$	• $\delta(q_{34}, b) = q_{159}$	• $\delta(q_{46}, a) = q_{68}$
• $\delta(q_4, a) = q_0$	• $\delta(q_{11}, b) = q_{30}$	• $\delta(q_{18}, b) = q_{44}$	• $\delta(q_{25}, b) = q_{118}$	• $\delta(q_{35}, a) = q_{13}$	• $\delta(q_{46}, b) = q_{69}$
• $\delta(q_4, b) = q_{102}$	• $\delta(q_{11}, c) = q_{31}$	• $\delta(q_{18}, c) = q_{45}$	• $\delta(q_{26}, a) = q_{11}$	• $\delta(q_{35}, b) = q_{158}$	
• $\delta(q_5, a) = q_1$	• $\delta(q_{12}, a) = q_2$	• $\delta(q_{19}, a) = q_7$	• $\delta(q_{26}, b) = q_{150}$	• $\delta(q_{36}, a) = q_{14}$	
• $\delta(q_5, b) = q_{117}$	• $\delta(q_{12}, b) = q_{154}$	• $\delta(q_{19}, b) = q_{110}$	• $\delta(q_{27}, a) = q_{46}$	• $\delta(q_{36}, b) = q_{166}$	



# TRANSICIONES

• $\delta(q46, c) = q70$	• $\delta(q54, a) = q24$	• $\delta(q65, a) = q45$	• $\delta(q76, a) = q53$	• $\delta(q84, a) = q73$	• $\delta(q93, a) = q81$
• $\delta(q46, d) = q71$	• $\delta(q54, b) = q135$	• $\delta(q65, b) = q108$	• $\delta(q76, b) = q136$	• $\delta(q84, b) = q126$	• $\delta(q93, b) = q148$
• $\delta(q47, a) = q20$	• $\delta(q55, a) = q24$	• $\delta(q67, a) = q45$	• $\delta(q77, a) = q53$	• $\delta(q85, a) = q73$	• $\delta(q94, a) = q87$
• $\delta(q47, b) = q117$	• $\delta(q55, b) = q142$	• $\delta(q67, b) = q109$	• $\delta(q77, b) = q137$	• $\delta(q85, b) = q127$	• $\delta(q94, b) = q129$
• $\delta(q48, a) = q20$	• $\delta(q56, a) = q80$	• $\delta(q68, a) = q46$	• $\delta(q78, a) = q88$	• $\delta(q86, a) = q73$	• $\delta(q95, a) = q98$
• $\delta(q48, b) = q112$	• $\delta(q56, b) = q81$	• $\delta(q68, b) = q114$	• $\delta(q78, b) = q73$	• $\delta(q86, b) = q128$	• $\delta(q95, b) = q99$
• $\delta(q49, a) = q22$	• $\delta(q56, c) = q82$	• $\delta(q69, a) = q46$	• $\delta(q78, c) = q89$	• $\delta(q87, a) = q94$	• $\delta(q95, c) = q100$
• $\delta(q49, b) = q120$	• $\delta(q56, d) = q83$	• $\delta(q69, b) = q115$	• $\delta(q78, d) = q90$	• $\delta(q87, b) = q95$	• $\delta(q95, d) = q101$
• $\delta(q50, a) = q22$	• $\delta(q57, a) = q27$	• $\delta(q71, a) = q46$	• $\delta(q79, a) = q53$	• $\delta(q87, c) = q96$	• $\delta(q96, a) = q87$
• $\delta(q50, b) = q121$	• $\delta(q57, b) = q152$	• $\delta(q71, b) = q116$	• $\delta(q79, b) = q138$	• $\delta(q87, d) = q97$	• $\delta(q96, b) = q131$
• $\delta(q51, a) = q22$	• $\delta(q59, a) = q27$	• $\delta(q72, a) = q52$	• $\delta(q80, a) = q56$	• $\delta(q88, a) = q78$	• $\delta(q97, a) = q87$
• $\delta(q51, b) = q122$	• $\delta(q59, b) = q153$	• $\delta(q72, b) = q123$	• $\delta(q80, b) = q145$	• $\delta(q88, b) = q139$	• $\delta(q97, b) = q130$
• $\delta(q52, a) = q72$	• $\delta(q61, a) = q32$	• $\delta(q73, a) = q84$	• $\delta(q81, a) = q91$	• $\delta(q89, a) = q78$	• $\delta(q98, a) = q95$
• $\delta(q52, b) = q73$	• $\delta(q61, b) = q163$	• $\delta(q73, b) = q85$	• $\delta(q81, b) = q92$	• $\delta(q89, b) = q140$	• $\delta(q98, b) = q132$
• $\delta(q52, c) = q74$	• $\delta(q62, a) = q32$	• $\delta(q73, c) = q86$	• $\delta(q81, c) = q73$	• $\delta(q90, a) = q78$	• $\delta(q99, a) = q95$
• $\delta(q52, d) = q75$	• $\delta(q62, b) = q162$	• $\delta(q73, d) = q87$	• $\delta(q81, d) = q93$	• $\delta(q90, b) = q141$	• $\delta(q99, b) = q133$
• $\delta(q53, a) = q76$	• $\delta(q63, a) = q33$	• $\delta(q74, a) = q52$	• $\delta(q82, a) = q56$	• $\delta(q91, a) = q81$	• $\delta(q101, a) = q95$
• $\delta(q53, b) = q77$	• $\delta(q63, b) = q161$	• $\delta(q74, b) = q124$	• $\delta(q82, b) = q144$	• $\delta(q91, b) = q146$	• $\delta(q101, b) = q134$
• $\delta(q53, c) = q78$	• $\delta(q64, a) = q33$	• $\delta(q75, a) = q52$	• $\delta(q83, a) = q56$	• $\delta(q92, a) = q81$	
• $\delta(q53, d) = q79$	• $\delta(q64, b) = q160$	• $\delta(q75, b) = q125$	• $\delta(q83, b) = q143$	• $\delta(q92, b) = q147$	





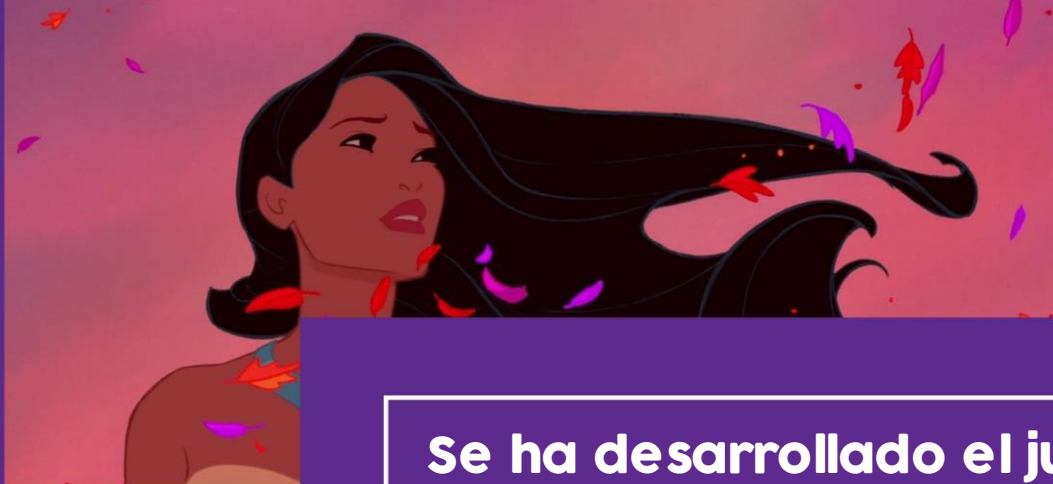
# TRABAJO FUTURO

Cosas en las que se puede mejorar:

- » » » **Eficiencia del código.**
- » » » **Agregar una interfaz gráfica que permita una mejor experiencia de usuario.**
- » » » **Expandir el juego agregando más mundos, tipos de preguntas, pistas y conexiones más claras entre las diversas películas.**



# CON CLU SIÓN



**Se ha desarrollado el juego correspondiente, en el proceso se ha reafirmado el conocimiento obtenido en clase sobre los AFD y aplicado conceptos para el desarrollo del autómeta.**

**Aunque la eficacia podría ser más, se ha cumplido el objetivo de utilizar los conocimientos obtenidos a lo largo del semestre y se ha cumplido la mayoría de cosas que fueron propuestas a inicio de semestre como la visión del proyecto.**

