Function name	#	Test description	Туре	San Name	nple input Value / value at address	T		ed result Value / value at address	Tree	Actual re		Pass /
		scanf()	int	ninput	scanf() => -1	Type	Name input for ninput	value / value at address	Type Invalid i	nput for ninput	/alue / value at address	Pas
int promptSelectMode		nInput < 0 scanf()										
Input conditions:	1	ninput = 0	int	nInput	scanf() => 0	int	function return	0	int	function return	0	Pas
nInput is from scanf()		scanf() nInput = 1	int	nInput	scanf() => 1	int	function return	1	int	function return	1	Pas
nInput is 0 or 1		scanf()	int	nInput	scanf() => 2	Invalid	input for nInput		Invalid i	nput for nInput		Pas
		nInput > 1	int *	nTargetHP	scanf() => 100		nTargetHP	100	int *	nTargetHP	100	Pas
		scanf()	int * int *	nTargetATK nTargetDEF	scanf() => 10 scanf() => 10		nTargetATK nTargetDEF	10 10	int * int *	nTargetATK nTargetDEF	10 10	Pas Pas
void promptSetStats		100/10/10/10/15	int *		scanf() => 10		nTargetSPD	10	int *	nTargetSPD	10	Pas
			int *	nTargetCrit nTargetHP	scanf() => 15 scanf() => 1000		nTargetCrit input for *nTarget	15 UD	int *	nTargetCrit nput for *nTargetHP	15	Pas Pas
Input conditions: Inputs are from scanf()		scanf()	int *		scanf() => 20		nTargetATK	20	int *	nTargetATK	20	Pas
*nTargetHP, *nTargetATK,	2	1000/20/20/20/100	int *		scanf() => 20 scanf() => 20	int *	nTargetDEF nTargetSPD	20 20	int * int *	nTargetDEF nTargetSPD	20 20	Pa: Pa:
argetDEF, and *nTargetSPD are less than or equal to 999			int *		scanf() => 100	int *	nTargetCrit	100	int *	nTargetCrit	100	Pas
argetCrit is less than or equal to 100			int *	nTargetHP	scanf() => 999	int *		999	int *	nTargetHP nTargetATK	999 999	Pas
		scanf() 999/999/999/999	int * int *		scanf() => 999 scanf() => 999		nTargetATK nTargetDEF	999 999	int * int *	nTargetDEF	999	Pas Pas
		999/999/999/999	int *		scanf() => 999	int *	nTargetSPD input for *nTarget	999	int *	nTargetSPD nput for *nTargetCrit	999	Pas Pas
			int *		scanf() => 999 10		nTargetATK	25	int *	nTargetATK	25	Pas
		ninput = 0	int *	nTargetSPD	10	int *	nTargetSPD * function return	13 "Dagger"	int * char *	nTargetSPD	13 "Dagger"	Pas Pas
char * equipWeapon			int *	nInput nTargetATK	10	int *	nTargetATK	30	int *	function return nTargetATK	30	Pas
Dan and Malana		ninput = 1	int *	nTargetSPD	10		nTargetSPD	10	int *	nTargetSPD	10	Pas
Preconditions: nInput is 0, 1, 2, or 3	3	-	int *	nInput nTargetATK	1 10		* function return nTargetATK	"Katana" 50	char *	function return nTargetATK	"Katana" 50	Pas Pas
argetATK and *nTargetSPD are non-		nInput = 2	int *	nTargetSPD	10	int *	nTargetSPD		int *	nTargetSPD		Pas
gative and less than or equal to 999		-	int *	nInput nTargetATK	2 10	int *	* function return nTargetATK	"Broadsword"	char *	function return nTargetATK	"Broadsword"	Pas Pas
		nInput = 3	int *	nTargetSPD	10	int *	nTargetSPD	20	int *	nTargetSPD	20	Pas
			int *	nInput nTargetHP	3 100	char int *	* function return nTargetHP	"Fist" 100	char *	function return nTargetHP	"Fist" 100	Pa: Pa:
		nInput = 0	int *	nTargetDEF	10	int *	nTargetDEF	13	int *	nTargetDEF	13	Pa
			int *	nTargetSPD nInput	10		nTargetSPD * function return	13 "Mythril"	int * char *	nTargetSPD function return	13 "Mythril"	Pa: Pa:
char * equipArmor		-	int *	nTargetHP	100	int *	nTargetHP	105	int *	nTargetHP	105	Pa
		ninput = 1	int *	nTargetDEF nTargetSPD	10 10	int *		18 10	int * int *	nTargetDEF nTargetSPD	18 10	Pa: Pa:
Preconditions: nInput is 0, 1, 2, or 3	4		int	nInput	1	char	* function return	"Chainmail"	char *	function return	"Chainmail"	Pa
*nTargetHP, *nTargetDEF, and			int * int *	nTargetHP nTargetDEF	100 10	int *	nTargetHP nTargetDEF	110 28	int * int *	nTargetHP nTargetDEF	110 28	Pa: Pa:
FargetSPD are non-negative and less than or equal to 999		nInput = 2	int *	nTargetSPD	10	int *	nTargetSPD	6	int *	nTargetSPD	6	Pa
than or equal to 555		-	int *	nInput nTargetHP	2 100		* function return nTargetHP	"Adamantite armor"	char *	function return '	'Adamantite armor"	Pa: Pa:
		nInput = 3	int *		10		nTargetDEF	2	int *	nTargetDEF	2	Pa
		miliput = 3	int *	nTargetSPD	10		nTargetSPD	20	int *	nTargetSPD	20	Pa
		scanf()	int	nInput			* function return input for ninput	"No armor"	char *	function return nput for ninput	"No armor"	Pas
		nInput < 0	int	nInput	scanf() => -1	IIIVallu	input for initiput		ilivaliu i	input for initiput		Pa
		scanf() nInput = 0	int	nInput	scanf() => 0	int	function return	0	int	function return	0	Pa
int promptWeaponSelect		scanf()	int	nInput	scanf() => 1	int	function return	1	int	function return	1	Pa
Input conditions:	5	nInput = 1 scanf()										
nInput is from scanf() nInput is 0, 1, 2, or 3		nInput = 2	int	nInput	scanf() => 2	int	function return	2	int	function return	2	Pa
,,,,		scanf() nInput = 3	int	nInput	scanf() => 3	int	function return	3	int	function return	3	Pa
		scanf()	int	ninput	scanf() => 4	Invalid	input for nInput		Invalid i	nput for ninput		Pa
		nInput > 3 scanf()										
		nInput < 0	int	nInput	scanf() => -1	Invalid	input for nInput		Invalid i	nput for ninput		Pas
		scanf() nInput = 0	int	nInput	scanf() => 0	int	function return	0	int	function return	0	Pas
int promptArmorSelect		scanf()	int	nInput	scanf() => 1	int	function return	1	int	function return	1	Pas
Input conditions:	6	nInput = 1 scanf()	2110	ППрис	3caii() =/ 1	1110	junction return	-	1110	junction return	-	ras
nInput is from scanf() nInput is 0, 1, 2, or 3		ninput = 2	int	nInput	scanf() => 2	int	function return	2	int	function return	2	Pas
ninput is 0, 1, 2, or 3		scanf()	int	nInput	scanf() => 3	int	function return	3	int	function return	3	Pas
		nInput = 3 scanf()					toront from toront		to a train			
		nInput > 3	int	nInput	scanf() => 4	invalid	input for nInput		invalidi	nput for nInput		Pas
		scanf() cInput = 'Y'	char	* cinput	scanf() => 'Y'	int	function return	1	int	function return	1	Pas
int promptPlayerEquipConfirm		scanf()	char	* cinput	scanf() => 'y'	int	function return	1	int	function return	1	Pa
	_	cinput = 'y' scanf()										
Input conditions: clnput is from scanf()	7	cinput = 'N'	char	* clnput	scanf() => 'N'	int	function return	0	int	function return	0	Pas
cinput is 'Y', 'y', 'N', or 'n'		scanf() cinput = 'n'	char	* clnput	scanf() => 'n'	int	function return	0	int	function return	0	Pa
		scanf()	Chan	* cinput	scanf() => 'A'	Invalid	input for cinput		Invalid :	nput for cinput		Pa:
		cinput = 'A'	int *		SCANT() => A		nEnemyHP	100	int *	nEnemyHP	100	Pa:
			int *	. ,	100		nEnemyHP nEnemyATK	25	int *	nEnemyATK	25	Pa: Pa:
		rand() % 4	int *	nEnemyDEF	10	int *	nEnemyDEF	13	int *	nEnemyDEF	13	Pa
void promptEnemyEquipConfirm		nWeaponInput = 0 nArmorInput = 0	int *		10 15		nEnemySPD nEnemyCrit	16 15	int * int *	nEnemySPD nEnemyCrit	16 15	Pa: Pa:
			int	nWeaponInput	rand() % 4 => 0		•			•		
Preconditions: *nEnemyHP, *nEnemyATK,		-	int *	nArmorInput nEnemyHP	rand() % 4 => 0 100	int *	nEnemyHP	105	int *	nEnemyHP	105	Pa
EnemyDEF, and *nEnemySPD are		- 10-4	int *	nEnemyATK	10	int *	nEnemyATK	30	int *	nEnemyATK	30	Pa
n-negative and less than or equal to 999	8	rand() % 4 nWeaponInput = 1	int *		10 10		nEnemyDEF nEnemySPD	18 10	int * int *	nEnemyDEF nEnemySPD	18 10	Pa Pa
to and an added		nArmorInput = 1	int *	nEnemyCrit	15		nEnemyCrit	15	int *	nEnemyCrit	15	Pa
Input conditions: VeaponInput and nArmorInput are			int int	nWeaponInput nArmorInput	rand() % 4 => 1 rand() % 4 => 1							
from rand() % 4			int *	nEnemyHP	100		nEnemyHP	100	int *	nEnemyHP	100	Pa
eaponInput and nArmorInput are 0, 1, 2, or 3		rand() % 4	int *	nEnemyATK nEnemyDEF	10 10		nEnemyATK nEnemyDEF	50 10	int * int *	nEnemyATK nEnemyDEF	50 10	Pa Pa
· · · ·		nWeaponInput = 2	int *	nEnemySPD	10	int *	nEnemySPD	15	int *	nEnemySPD	15	Pa
		nArmorInput = 3	int *	nEnemyCrit nWeaponInput	15 rand() % 4 => 2	int *	nEnemyCrit	15	int *	nEnemyCrit	15	Pa
			int	nWeaponinput nArmorInput	rand() % 4 => 2 rand() % 4 => 3							
		nTargetDEF ≤ nActorATK	int	nActorATK	50	int *	nTargetCurrentH	II 60	int *	nTargetCurrentHI	60	Pa
		nActorATK - nTargetDEF ≤ nTargetCurrentHP	int int *	nActorCrit nTargetCurrentHF	15							
			int	nTargetDEF	10							
		rand() % 100 nCritRoll ≥ nActorCrit	int int	nActorIsPlayer nCritRoll	1 rand() % 100 => 99							
											100	Pa
void processAttack		nTargetDEF > nActorATK	int	nActorATK	50	int *	nTargetCurrentH	100	int *	nTargetCurrentHI	100	
Preconditions:		nActorATK - nTargetDEF ≤	int	nActorCrit	15	int *	nTargetCurrentH	100	int *	nTargetCurrentHI	100	
					15	int *	nTargetCurrentH	100	int *	nTargetCurrentHI	100	

meteric is non negative and ress than											
or equal to 100	-	nActorATK <	int nActorATK	50	int *	nTargetCurrentHI	50	int *	nTargetCurrentHI	50	Pass
nActorIsPlayer is 0 or 1		nTargetCurrentHP	<pre>int nActorCrit</pre>	15							
incluis layer is 0 or 1		margeteurrentrir	<pre>int * nTargetCurrentHP</pre>	100							
Input conditions:		rand() % 100	<pre>int nTargetDEF</pre>	10							
nCritRoll is from rand() % 100		nCritRoll < nActorCrit	<pre>int nActorIsPlayer</pre>	1							
nCritRoll ranges from 0 to 99		IICHINOII S HACTOFUTI	int nCritRoll	rand() % 100 => 1							
ilcritkoli raliges from 0 to 99		nActorATK - nTargetDEF >	int nActorATK	999	int *	nTargetCurrentHI	0	int *	nTargetCurrentHI	0	Pass
		nTargetCurrentHP	<pre>int nActorCrit</pre>	15							
		margetcurrentin	<pre>int * nTargetCurrentHP</pre>	100							
		rand() % 100	<pre>int nTargetDEF</pre>	10							
		nCritRoll ≥ nActorCrit	int nActorIsPlayer	1							
		HCHIKOH 2 HACIOTCHI	int nCritRoll	rand() % 100 => 99							
void processBlock		nActorDEF = 10	int * nActorDEF	10	int *	nActorDEF	20	int *	nActorDEF	20	Pass
Preconditions: *nActorDEF is non-negative and less	10	nActorDEF = 50	int * nActorDEF	50	int *	nActorDEF	100	int *	nActorDEF	100	Pass
than or equal to 999 nActorIsPlayer is 0 or 1		nActorDEF = 999	int * nActorDEF	999	int *	nActorDEF	1998	int *	nActorDEF	1998	Pass
		nActorATK = 10	int * nActorATK	10	int *	nActorATK	20	int *	nActorATK	20	Pass
		nActorATK = 10 nActorSPD = 10	int * nActorSPD	10	int *	nActorSPD	20	int *	nActorSPD	20	Pass
		nActorIsCharging = 0	int * nActorIsCharging	0	int *	nActorIsCharging	0	int *	nActorIsCharging	0	Pass
void processCharge		HACTORISCHARGING = 0	int nActorIsPlayer	A							
voia processcriarge			int * nActorATK	20	int *	nActorATK	20	int *	nActorATK	20	Pass
Preconditions:	11	nActorIsCharging = 1	int * nActorSPD	20	int *	nActorSPD	20	int *	nActorSPD	20	Pass
nActorATK and nTargetSPD are non-	11	incluiscidigilig = 1	<pre>int * nActorIsCharging</pre>	1	int *	nActorIsCharging	0	int *	nActorIsCharging	0	Pass
negative and ≤ 999			int nActorIsPlayer	1							
negative dilu 5 999		nActorATK = 999	int * nActorATK	999	int *	nActorATK	1998	int *	nActorATK	1998	Pass
		nActorATK = 999 nActorSPD = 999	int * nActorSPD	999	int *	nActorSPD	1998	int *	nActorSPD	1998	Pass
			int * nActorIsCharging	0	int *	nActorIsCharging	0	int *	nActorIsCharging	0	Pass
		nActorIsCharging = 0	int nActorIsPlayer	1							

Screen Output Event Result

\// 		User presses enter key	Program progresses
[======] 	User enters 0	Program enters Standard mode
[=====================================	Select a weapon.	User enters 2	Broadsword is selected for playe
Yo	u selected the following weapon: Broadsword	User presses enter key	Program progresses

[======================================	Select an armor.		
[==========]		
[=====================================	[====================================		
 [0] Mythril 	Lightweight armor that increases DEF and SPD. (DEF + 3, SPD + 3)		
 [1] Chainmail 	Standard chainmail armor that boosts DEF and HP (DEF + 8, HP + 5)		
[2] Adamantite armor	 Heavy armor than boosts DEF and HP; lowers SPD. (DEF + 18, HP + 10, SPD - 4)	User enters 3	No armor is selected for player
[[
[=====================================] [] Current stats: 100/10/10/10 []		
.,			
·	u selected the following armor: No armor	User presses enter key	Program progresses
>> Press Enter to proceed.			
You wil	ll battle with the following stats:		
[=====================================	[===========] 		
ATK \ DEF \ SPD 50	[]	User enters Y	Program progresses
Critical chance: 15%			
Proceed? (Y/y/N/n)	[===============] 		
,,			
L Comments of the Comments of	nemy is selecting their equipment!	User presses enter key	Program progresses
f			
	y has chosen the following equipment:		
] [] [] [] []	Program generates value for rand() % 4	Dagger and Mythril are selected for enemy
] [] [] [] Dagger Mythril		
Base HP: 100 Critical chance: 15%		User presses enter key	Program progresses
>> Press Enter to proceed.			
]		
[enemy gladiator challenges you! Reduce their HP to 0 to win!	User presses enter key	Program progresses
>> Press Enter to proceed.	•		

Enter an action (0/1/2)				
You	vs vs	Enemy	J User enters 2 	Charge action is selected for player
Critical chance: 15%	[========================= Deal damage to the enemy. Brace yourself. (Doubles AT	DEF this turn) K and SPD next turn)	Program generates value for rand() % 3	Block action is selected for enem
Enemy blocked! DEF doub] vs] 		[]] Enemy executes Block action] 	Enemy DEF is doubled
0 / \ / \ [User presses enter key	Program progresses
You charged! ATK and SPI	VS] 	e next turn.	 Player executes Charge action 	n Player ATK and SPD are doubled
0 / \ /\ 			User presses enter key	Program progresses
Enter an action (0/1/2)				Enemy DEF is reverted Player charging flag is enabled



```
Deal damage to the enemy.
 [0] Attack
                           Brace yourself. (Doubles DEF this turn)
Charge power. (Doubles ATK and SPD next turn)
 [1] Block
                                                                                          Program generates value for
                                                                                                                 Block action is selected for enemy
 [2] Charge
                                                                                                rand() % 3
 You blocked! DEF doubled this turn.
VS
                                                             Enemy
 ################::::
                                                     Player executes Block action
                                                                                                                      Player DEF is doubled
 HP: 85 / 100
                                                      HP: 13 / 100
 ATK \ DEF \ SPD 50 / 20 / 15
                                                     ATK / DEF / SPD
25 \ 13 \ 16
 Critical chance: 15%
                                                     Critical chance: 15%
                                                    [=========]
                                                               0
/|\
/ \
                                                                                            User presses enter key
                                                                                                                      Program progresses
>> Press Enter to proceed.
Enemy blocked! DEF doubled this turn.
------1
                                                     VS
        You
                                                             Enemy
 ###############::::
                                                      Enemy DEF is doubled
                                                                                          Enemy executes Block action
 HP: 85 / 100
                                                      HP: 13 / 100
 ATK \ DEF \ SPD
50 / 20 / 15
Critical chance: 15%
                                                     ATK / DEF / SPD
25 \ 26 \ 16
                                                      Critical chance: 15%
                                                                                            User presses enter key
                                                                                                                      Program progresses
 Press Enter to proceed.
Enter an action (0/1/2).
 -----
                                                                                                                     Player DEF is reverted
 [===========
                                                                                                Turn begins
         You
                                     VS
                                                             Enemy
                                                                                                                     Enemy DEF is reverted
 ###############:::::]
                                                     HP: 85 / 100
                                                      HP: 13 / 100
 ATK \ DEF \ SPD
50 / 10 / 15
Critical chance: 15%
                                                     ATK / DEF / SPD
25 \ 13 \ 16
                                                      Critical chance: 15%
                                                                                                                   Attack action is selected for
                                                                                               User enters 0
                                                                                                                           player
         0
/|\
/ \
 [0] Attack
                           Deal damage to the enemy.
                           Brace yourself. (Doubles DEF this turn)
 [1] Block
                                                                                          Program generates value for
                                                                                                                   Charge action is selected for
 [2] Charge
                           Charge power. (Doubles ATK and SPD next turn)
                                                                                                rand() % 3
                                                                                                                           enemy
```

Enemy charged! ATK and S	SPD doubled until the end of	the next turn.		
You] vs		Enemy executes Charge action	Enemy ATK and SPD are doubled
Critical chance: 15%		Critical chance: 15% 		
0 / \ / \		0 / \ / \		
] [ĺ	User presses enter key	Program progresses
>> Press Enter to proceed				
You attacked! Dealt 13				Enemy HP is reduced by
[=====================================	VS	[] Enemy [::::::::::::] HP: 0 / 100	Player executes Attack action	Player ATK - Enemy DEF = 50 - 13 = 37 Since 37 > Enemy HP, it is instead
ATK \ DEF \ SPD 50 / 10 / 15 Critical chance: 15%		ATK / DEF / SPD 50 \ 13 \ 32 Critical chance: 15% [reduced by Enemy HP = 13
0 / \ /\		0 / \ /\		
] []] [į 	User presses enter key	Program progresses
>> Press Enter to proceed				
Ì	GAME OVER You won!	Ĩ	User presses enter key	Program progresses

Program terminates