Method	#	Test Description	Class: MainControl Sample Input Data	1	Actual Output	P/F
nitMenu	_	Test Description Navigate to Pokemon menu	User input: 1	Expected Output Pokemon menu displayed	Actual Output Pokemon menu displayed	P/F
nitmenu		-	· ·		' '	
		Navigate to Moves menu	User input: 2	Moves menu displayed	Moves menu displayed	P
		Navigate to Items menu	User input: 3	Items menu displayed	Items menu displayed	P
		Exit application	User input: 4	Application exits	Application exits	Р
		Invalid menu choice (negative)	User input: 9	"Out of Range!" message, menu redisplayed		Р
	6	Non-numeric input (negative)	User input: "abc"	"Invalid Input!" message, menu redisplayed	"Invalid Input!" message, menu redisplayed	Р
nitPokemonMenu	7	Valid Pokemon menu navigation	User inputs: 1-6	Appropriate Pokemon submenu actions	Appropriate Pokemon submenu actions	Р
	8	Invalid Pokemon menu choice (negative)	User input: 7	"Out of Range!" message, menu redisplayed	"Out of Range!" message, menu redisplayed	Р
nitMovesMenu	9	Valid Moves menu navigation	User inputs: 1-6	Appropriate Moves submenu actions	Appropriate Moves submenu actions	Р
	10	Invalid Moves menu choice (negative)	User input: 0	"Out of Range!" message, menu redisplayed	"Out of Range!" message, menu redisplayed	Р
nitItemsMenu		Valid Items menu navigation	User inputs: 1-3	Appropriate Items submenu actions	Appropriate Items submenu actions	Р
		Invalid Items menu choice (negative)	User input: 4	"Out of Range!" message, menu redisplayed	"Out of Range!" message, menu redisplayed	
		mana reemo mena enoree (negative)	ossi iiipaa i	out or range. Incoder, menta reaspunce	out of hanger message, mena realspunyea	
Mashad		Tank Danawinking	Class: ConsoleVie		Antical Contacts	D/F
Method	#	Test Description	Sample Input Data	Expected Output	Actual Output	P/F
promptInt		Valid integer input	User enters "5"	Returns 5	Returns 5	P
		Invalid input then valid (negative)	User enters "abc" then "5"	"Invalid input!" message, then returns 5	"Invalid input!" message, then returns 5	Р
	3	Negative integer	User enters "-10"	Returns -10	Returns -10	P
promptIntRange	4	Valid range input	Input: "3", range: 1-5	Returns 3	Returns 3	P
	5	Out of range input (negative)	Input: "10", range: 1-5	"Out of Range!" message, re-prompt	"Out of Range!" message, re-prompt	Р
		Invalid then valid input	Input: "abc" then "3", range: 1-5	Error messages, then returns 3	Error messages, then returns 3	Р
			,	5 ,	5 ,	
			Class: PokemonConti	oller		
Method	#	Test Description	Sample Input Data	Expected Output	Actual Output	P/F
savePokemonEntries	1	Save valid Pokemon list	List with 3 valid Pokemon objects	File saved successfully, success message	File saved successfully, success message	P
saver oxemonizationes		Save empty Pokemon list (boundary)	Empty Pokemon list	Empty file created, success message	Empty file created, success message	P
		Save list with null Pokemon			1, 1	P
18.1 5.1			List with 2 valid Pokemon and 1 null	File with 2 Pokemon entries, null skipped	File with 2 Pokemon entries, null skipped	
oadPokemonEntries		Load valid Pokemon file	Existing valid Pokedex.txt	Pokemon list populated with file data	Pokemon list populated with file data	Р
	5	Load non-existent file (negative)	Non-existent file path	Error handling, empty list or error message	Error handling, empty list or error message	Р
	6	Load corrupted file (negative)	File with invalid/incomplete data	Exception caught, error message displayed	Exception caught, error message displayed	P
viewAllPokemon	7	View populated Pokemon list	List with 3 valid Pokemon	All Pokemon displayed via PokemonView	All Pokemon displayed via PokemonView	Р
	8	View empty Pokemon list (boundary)	Empty Pokemon list	"No Pokemon Entries." message	"No Pokemon Entries." message	Р
searchPokemonMenu		Search by valid attribute and key	attribute="name", key="Pikachu"	Matching Pokemon displayed with count	Matching Pokemon displayed with count	Р
ocarem onemominema		Search with no matches	attribute="name", key="NonExistent"	"No Pokemon found" message	"No Pokemon found" message	P
	10	Search with no matches	First: "invalid", Second: "name", key="	No Fokemon found message	Error message, re-prompt, then valid	г
	11	Search with invalid attribute initially	Pikachu"	Error message, re-prompt, then valid results	results	P
Markad		Test Description	Class: PokemonVie		Actual Output	D/F
Method	#	Test Description	Sample Input Data	Expected Output	Actual Output	P/F
viewPokemon	1	Display Pokemon with all valid data	Complete Pokemon object with all fields	Formatted Pokemon details with stats and evolution	Formatted Pokemon details with stats and evolution	P
VICWI ORCHIOII						
		Display Pokemon with null type2	Pokemon object with type2 = null	Pokemon details with single type displayed	Pokemon details with single type displayed	
	3	Display Pokemon with null heldItem	Pokemon object with heldItem = null	Pokemon details with "null" for held item	Pokemon details with "null" for held item	Р
of ann A II Do I come	.	Disalau lisa misk soutsiste D. C.	Assessed for socials accounted professional Co.	Formatted list showing #, name, and type(s)	Formatted list showing #, name, and type(s)	_
viewAllPokemon		Display list with multiple Pokemon	ArrayList with 3 valid Pokemon objects	for each "" + "No Pokemon Entries." + ""	for each "" + "No Pokemon Entries." + ""	P P
	5	Display empty Pokemon list (boundary)	Empty ArrayList <pokemon></pokemon>			۲
	c	Display list with null Pokemon	ArrayList with 2 valid Pokemon and 1 null	List showing only 2 valid Pokemon, null skipped	List showing only 2 valid Pokemon, null skipped	Р
	0	Display list with all null Pokemon	Anayaist with 2 valid Foreillon and I field	эмрреи	Simpped	-
	7	(boundary)	ArrayList with only null entries	"" + "No Pokemon Entries." + ""	"" + "No Pokemon Entries." + ""	Р
		Display Pokemon with dual types		Pokemon displayed as "Name Type1/Type2"		P
			Pokemon with both type1 and type2		Pokemon displayed as "Name Type1/Type2"	
	9	Display Pokemon with single type	Pokemon with only type1	Pokemon displayed as "Name Type1"	Pokemon displayed as "Name Type1"	Р
	10	Display Pokemon with full moveSet	Pokemon with 4 valid moves	Numbered list of 4 moves (1] Move1, 2] Move2, etc.)	Numbered list of 4 moves (1] Move1, 2] Move2, etc.) Numbered list of 2 moves only, nulls	Р
viewMoveSet .		Display Pokemon with partial moveSet	Pokemon with 2 moves, 2 nulls	Numbered list of 2 moves only, nulls skipped	skipped	Р
viewMoveSet		Display Pokemon with empty moveSet		No moves displayed (all skipped)	No moves displayed (all skipped)	P P
viewMoveSet	12	Display Pokemon with empty moveSet (boundary) Display Pokemon with single move	Pokemon with all null moves Pokemon with 1 move, 3 nulls	Single numbered move displayed	Single numbered move displayed	
viewMoveSet	12	(boundary)		Single numbered move displayed	Single numbered move displayed	
viewMoveSet	12	(boundary)			Single numbered move displayed	
viewMoveSet Method	12	(boundary)	Pokemon with 1 move, 3 nulls		Actual Output	P/F
Method	12 13	(boundary) Display Pokemon with single move	Pokemon with 1 move, 3 nulls Class: PokemonFileHa	ndler Expected Output File created with Pokemon data, "Successfully Saved!" message	Actual Output File created with Pokemon data, "Successfully Saved!" message	P/F
viewMoveSet Method save	12 13	(boundary) Display Pokemon with single move Test Description	Pokemon with 1 move, 3 nulls Class: PokemonFileHa Sample Input Data	ndler Expected Output File created with Pokemon data, "Successfully	Actual Output File created with Pokemon data,	

					File with only 2 Pokemon entries, null	
		Save list with null Pokemon	ArrayList with 2 valid Pokemon and 1 null		skipped	Р
		Save Pokemon with null moveSet	Pokemon with null moves in moveSet array	File created with "N/As" for null moves	File created with "N/As" for null moves	P
	5	Save Pokemon with null optional fields	Pokemon with null type2, heldItem	File created with "N/As" for null fields	File created with "N/As" for null fields	Р
	6	Save to invalid file path (negative)	Valid Pokemon list, invalid file path	IOException caught, "An error occurred." message	IOException caught, "An error occurred." message	Р
		Save null Pokemon list (boundary)	null ArrayList	NullPointerException or handled gracefully	NullPointerException or handled gracefully	Р
oad	8	Load valid Pokemon file	Existing "model/db/Pokedex.txt" with valid data	ArrayList <pokemon> with correct objects, "Successfully Loaded!" message</pokemon>	ArrayList <pokemon> with correct objects, "Successfully Loaded!" message</pokemon>	P
	9	Load from non-existent file (negative)	Non-existent file path	Exception caught, "An error occurred." message, empty ArrayList returned	Exception caught, "An error occurred." message, empty ArrayList returned	P
	10	Load from empty file (boundary)	Empty "model/db/Pokedex.txt" file	Empty ArrayList <pokemon>, "Successfully Loaded!" message</pokemon>	Empty ArrayList <pokemon>, "Successfully Loaded!" message</pokemon>	P
			Class: PokemonManage	ment		
Method	#	Test Description	Sample Input Data	Expected Output	Actual Output	P/F
earchPokemon	1	Search by exact Pokemon name	attribute="name", key="Pikachu"	ArrayList containing Pokemon with name "Pikachu"	ArrayList containing Pokemon with name "Pikachu"	Р
	2	Search by partial Pokemon name	attribute="name", key="Pika"	ArrayList containing Pokemon with names containing "Pika"	ArrayList containing Pokemon with names containing "Pika"	P
	3	Search by type1	attribute="type", key="Electric"	ArrayList containing Pokemon with Electric as type1	ArrayList containing Pokemon with Electric as type1	P
	4	Search by type2	attribute="type", key="Flying"	ArrayList containing Pokemon with Flying as type1 or type2	ArrayList containing Pokemon with Flying as type1 or type2	Р
	5	Search by exact Pokedex number	attribute="pokedex", key="25"	ArrayList containing Pokemon with Pokedex number 25	ArrayList containing Pokemon with Pokedex number 25	P
	6	Search with case insensitive input	attribute="TYPE", key="electric"	Same results as exact case match	Same results as exact case match	Р
	7	Search with non-existent data (negative)	attribute="name", key="NonExistent"	Empty ArrayList	Empty ArrayList	P
	8	Search with invalid attribute (negative)	attribute="invalid", key="test"	Empty ArrayList	Empty ArrayList	Р
		Search in empty Pokemon list (boundary)	attribute="name", key="Pikachu"	Empty ArrayList ArrayList with matching non-null Pokemon	Empty ArrayList ArrayList with matching non-null Pokemon	P
		Search with null Pokemon in list	attribute="name", key="Pikachu"	only	only	P
ddPokemon		Add valid Pokemon	Valid Pokemon object	Pokemon added to list, list size increased	Pokemon added to list, list size increased null added to list (based on	P
		Add null Pokemon (boundary)	null Pokemon object	null added to list (based on implementation)	implementation)	P
etPokemonList	13	Set valid Pokemon list	ArrayList with 3 valid Pokemon	Pokemon list updated with 3 Pokemon	Pokemon list updated with 3 Pokemon	Р
	14	Set list with null Pokemon	ArrayList with 2 valid Pokemon and 1 null	List contains only 2 valid Pokemon, null skipped	List contains only 2 valid Pokemon, null skipped	Р
	15	Set empty list (boundary)	Empty ArrayList	Pokemon list cleared	Pokemon list cleared	Р
DupePokedexNum		Check existing Pokedex number	num=25 (exists in list)	TRUE	TRUE	Р
	17	Check non-existing Pokedex number	num=999 (doesn't exist)	FALSE	FALSE	Р
	18	Check in empty list (boundary)	num=25, empty Pokemon list	FALSE	FALSE	Р
	19	Check with null Pokemon in list	num=25, list with null entries	Correct boolean result ignoring nulls	Correct boolean result ignoring nulls	Р
DupeName	20	Check existing Pokemon name	name="Pikachu" (exists in list)	TRUE	TRUE	Р
	21	Check non-existing Pokemon name	name="NonExistent"	FALSE	FALSE	Р
	22	Check with case insensitive match	name="PIKACHU" (exists as "Pikachu")	TRUE	TRUE	Р
	23	Check in empty list (boundary)	name="Pikachu", empty list	FALSE	FALSE	Р
			Class Manus Cantus II			
Method	#	Test Description	Class: ItemsControll Sample Input Data	Expected Output	Actual Output	P/
iewAllItems	-	View items with populated list	Items list with 3 valid items	All items displayed via ItemsView	All items displayed via ItemsView	P P/
iewattiteins		View items with empty list (boundary)	Empty items list	Empty display or "no items" message	Empty display or "no items" message	P
		View items with null items in list	List with 2 valid items and 1 null	Only valid items displayed	Only valid items displayed	P
	,	view items with fluit items in tist	List with 2 valid items and 1 hutt	Only valid items displayed	Matching items displayed with count	-
earchitem	4	Search by valid attribute and key	attribute="name", key="Potion"	Matching items displayed with count message	message	Р
	5	Search with no matches	attribute="name", key="NonExistent"	"No items found" message	"No items found" message	Р
			First input: "invalid", Second: "name", key="	Error message, re-prompt, then valid search	Error message, re-prompt, then valid search	
		Search with invalid attribute initially	Potion"	results	results	Р
		Search by category	attribute="category", key="Medicine"	Items in Medicine category displayed Items with "heal" in description/effects	Items in Medicine category displayed Items with "heal" in description/effects	Р
		Search by keyword	attribute="keyword", key="heal"	displayed	displayed	P P
		Search with case insensitive attribute	attribute="NAME", key="potion"	Same results as exact case match	Same results as exact case match All items displayed (empty string matches	P
	10	Search with empty key (boundary)	attribute="name", key=""	All items displayed (empty string matches all)	all)	-
			Class: ItemsManagem	ent		
Method	#	Test Description	Sample Input Data	Expected Output	Actual Output	P/
	1	Search by exact item name	attribute="name", key="Potion"	ArrayList containing Items with name "Potion"	ArrayList containing Items with name "Potion"	Р
earchitems			attribute="name", key="pot"	ArrayList containing all Items with names containing "pot"	ArrayList containing all Items with names containing "pot"	P
earchitems	2	Search by partial item name		CONTRACTIONS DOL	CONTRACTOR DOL	1.
earchitems		Search by partial item name Search by item category		ArrayList containing all Items in "Medicine"	ArrayList containing all Items in "Medicine"	Р
earchitems		Search by partial item name Search by item category	attribute="category", key="Medicine"	9 .	- ,	Р

	_	County by Lawrence in a ffect	at the transfer of the same of	ArrayList containing Items with "restore" in	ArrayList containing Items with "restore" in	_
		Search by keyword in effects	attribute="keyword", key="restore"	description or effects	description or effects	P
		Search with case insensitive input	attribute="NAME", key="POTION"	Same results as lowercase search	Same results as lowercase search	P
		Search with non-existent key (negative)	attribute="name", key="NonExistent"	Empty ArrayList	Empty ArrayList	
		Search with invalid attribute (negative)	attribute="invalid", key="test"	Empty ArrayList	Empty ArrayList	P
		Search in empty item list (boundary)	attribute="name", key="Potion"	Empty ArrayList	Empty ArrayList	P
	10	Search with null items in list	attribute="name", key="Potion"	ArrayList with matching non-null items only	ArrayList with matching non-null items only	Р
			Class: ItemsView			1 5/5
Method	#	Test Description	Sample Input Data	Expected Output	Actual Output	P/F
viewItems		Display items with all valid data	ArrayList with 2 complete Items	Formatted item display with all details	Formatted item display with all details	P
		Display items with null entries	List with null Items	Only non-null items displayed	Only non-null items displayed	P
	3	Display empty list (boundary)	Empty ArrayList	No output or minimal display	No output or minimal display	P
			Class: ItemsFileHan	dler		
Method	#	Test Description	Sample Input Data	Expected Output	Actual Output	P/F
oad	1	Load valid Items file	Existing "model/db/Items.txt" with valid data	ArrayList <items> with correct item objects</items>	ArrayList <items> with correct item objects</items>	Р
				IOException caught, "An error occurred."	IOException caught, "An error occurred."	
		Load from non-existent file (negative)	Non-existent file path	message, empty ArrayList returned	message, empty ArrayList returned	Р
	3	Load from empty file (boundary)	Empty "model/db/Items.txt" file	Empty ArrayList <items></items>	Empty ArrayList <items></items>	Р
		Load file with malformed data (negative)	File with incomplete/invalid item data	Exception caught, "An error occurred." message	Exception caught, "An error occurred." message	P
	4	2000 me with mationined data (negative)	with meomplete/invalid item data	ArrayList with Items objects having null	ArrayList with Items objects having null	1
	5	Load file with N/As tokens	File containing "N/As" values	values where N/As found	values where N/As found	P
		Load file with invalid double data	File with non-numeric values for price	NumberFormatException caught, "An error	NumberFormatException caught, "An error	
	6	(negative)	fields	occurred." message	occurred." message	Р
	7	Load file with missing tokens (negative)	File with insufficient data per line	ArrayIndexOutOfBoundsException caught, error handling	ArrayIndexOutOfBoundsException caught, error handling	P
	8	Load file with negative prices	File with negative price values	ArrayList with Items having negative price values	ArrayList with Items having negative price values	D
					ArrayList with Items having zero price	
		Load file with zero prices (boundary)	File with price values = 0.0	ArrayList with Items having zero price values	values ArrayList with Items having large price	P
	10	Load file with large price values	File with prices > 999999.99	ArrayList with Items having large price values	values	P
			Class: MovesContro			_
Method	#	Test Description	Sample Input Data	Expected Output	Actual Output	P/F
		Convenience in the control of the co	attaile uta lla ann all lea ann and llTa aldall	Matching moves displayed with count	Matching moves displayed with count	P
searchMoves		Search with valid attribute and keyword Search with no matches	attribute="name", keyword="Tackle"	message "No moves found" message	message	P
		Search with no matthes	attribute="name", keyword="NonExistent"	Error message, re-prompt, then valid search	"No moves found" message	Р
	3	Search with invalid attribute initially	First input: "invalid", Second: "name", keyword="Tackle"	results	Error message, re-prompt, then valid search results	P
	4	Search by classification	attribute="classification", keyword=" Physical"	Moves with Physical classification displayed	Moves with Physical classification displayed	Р
		Search by type	attribute="type", keyword="Fire"	Moves with Fire type displayed	Moves with Fire type displayed	Р
		Search with case insensitive attribute	attribute="NAME", keyword="tackle"	Same results as exact case match	Same results as exact case match	Р
				All moves displayed (empty string matches	All moves displayed (empty string matches	
	7	Search with empty keyword (boundary)	attribute="name", keyword=""	all)	all)	Р
	8	Search in empty moves list (boundary)	attribute="name", keyword="Tackle"	"No moves found" message	"No moves found" message	Р
addMoves	9	Add valid move with all fields	name="Thunder", type="Electric", classification="TM", desc="Electric attack"	Move added successfully, success message	Move added successfully, success message	P
			name="", type="Electric", classification="	, ,		
	10	Add move with empty name (negative)	TM", desc="Attack"	"Invalid input!" error message	"Invalid input!" error message	Р
	11	Add move with empty type (negative)	name="Thunder", type="", classification=" TM", desc="Attack"	"Invalid input!" error message	"Invalid input!" error message	P
	12	Add move with empty classification (negative)	name="Thunder", type="Electric", classification="", desc="Attack"	"Invalid input!" error message	"Invalid input!" error message	Р
	12	(IIICBULIVE)	name="Thunder", type="Electric",	Move added successfully (description can be	Move added successfully (description can	-
	13	Add move with empty description	classification="TM", desc=""	empty)	be empty)	Р
		Add move with all fields empty (negative)	name="", type="", classification="", desc=""	"Invalid input!" error message	"Invalid input!" error message	Р
viewMoves	15	View moves with populated list	Moves list with 3 valid moves	All moves displayed via MovesView	All moves displayed via MovesView	Р
	16	View moves with empty list (boundary)	Empty moves list	"No moves in list." message	"No moves in list." message	Р
aveMoves	17	Save current moves list	Moves list with valid data	File saved successfully via fileHandler	File saved successfully via fileHandler	Р
	18	Save empty moves list (boundary)	Empty moves list	Empty file saved successfully	Empty file saved successfully	Р
	19	Load moves from file	Existing valid moves file	Moves list populated with file data	Moves list populated with file data	Р
oadMoves		Load from non-existent file (negative)	Non-existent moves file	Error handling via fileHandler	Error handling via fileHandler	P
oadMoves	20					
oadMoves	20					
			Class: MovesView			
oadMoves Method	#	Test Description	Class: MovesView Sample Input Data	v Expected Output	Actual Output	P/F
Method	#		Sample Input Data	Expected Output	Header + formatted table with 3 move	P/F
Method	# 1	Display list with multiple moves	Sample Input Data ArrayList with 3 valid Moves objects	Expected Output Header + formatted table with 3 move entries	Header + formatted table with 3 move entries	P/F P
Method displayMoves	# 1		Sample Input Data	Expected Output	Header + formatted table with 3 move entries "=== MOVE LIST ===" + "No moves in list."	P/F P

	4	Display single move	ArrayList with 1 valid Move	Header + formatted table with 1 move entry	Header + formatted table with 1 move entry	P
		- repress of the second		Formatted line with name, type,	Formatted line with name, type,	
displayMove	5	Display valid move	Valid Moves object with all fields	classification, description	classification, description	P
	6	Display move with null fields (boundary)	Moves object with some null fields	Formatted line with "null" displayed for null fields	Formatted line with "null" displayed for null fields	P
			Moves object with 60+ character	Formatted line with description (may wrap or	Formatted line with description (may wrap	
	7	Display move with long description	description	truncate)	or truncate)	P
			Class: MovesManage	nent		
Method	#	Test Description	Sample Input Data	Expected Output	Actual Output	P/F
				moves list updated with 3 moves, previous	moves list updated with 3 moves, previous	
setMoveList	1	Set valid move list	ArrayList with 3 valid Moves objects	list cleared	list cleared	Р
	2	Set list with null moves	ArrayList with 2 valid moves and 1 null	moves list contains only 2 valid moves, null skipped	moves list contains only 2 valid moves, null skipped	P
	3	Set empty list (boundary)	Empty ArrayList <moves></moves>	moves list cleared and remains empty	moves list cleared and remains empty	P
			New ArrayList with 2 moves, existing list			
	4	Set list replacing existing moves	has 3	Old list cleared, new list with 2 moves set moves list cleared and remains empty (all	Old list cleared, new list with 2 moves set	P
	5	Set list with all null moves (boundary)	ArrayList with 3 null Moves objects	nulls skipped)	moves list cleared and remains empty (all nulls skipped)	P
	6	Set null list (boundary)	null ArrayList	NullPointerException thrown	NullPointerException thrown	Р
	7	Set large move list	ArrayList with 100 valid Moves objects	moves list updated with all 100 moves	moves list updated with all 100 moves	P
earchMoves		Search by exact move name	attributo-"namo" kovuvord-"Tacklo"	Arrayl ist containing move with name "Tackle"	ArrayList containing move with name "Tackle"	D
EGICIIMUVES	8	Search by exact move name	attribute="name", keyword="Tackle"	ArrayList containing move with name "Tackle" ArrayList containing moves with names	ArrayList containing moves with names	r
	9	Search by partial move name	attribute="name", keyword="tack"	containing "tack"	containing "tack"	P
	40	Soarch by move name and incomin	attributa-llnamell kor	Arraydist containing many with some PT-11-P	ArrayList containing move with name	P
	10	Search by move name case insensitive	attribute="name", keyword="TACKLE" attribute="classification", keyword="	ArrayList containing move with name "Tackle" ArrayList containing moves with "Physical"	"Tackle" ArrayList containing moves with "Physical"	۲
	11	Search by exact classification	Physical"	classification	classification	P
		Sand branchist to the	and a second	ArrayList containing moves with	ArrayList containing moves with	
	12	Search by partial classification	attribute="classification", keyword="phys" attribute="classification", keyword="	classifications containing "phys" ArrayList containing moves with "Physical"	classifications containing "phys" ArrayList containing moves with "Physical"	P
	13	Search by classification case insensitive	PHYSICAL"	classification	classification	P
	14	Search by exact move type	attribute="type", keyword="Fire"	ArrayList containing moves with "Fire" type	ArrayList containing moves with "Fire" type	P
				ArrayList containing moves with types	ArrayList containing moves with types	
		Search by partial move type Search by type case insensitive	attribute="type", keyword="fir"	containing "fir"	containing "fir"	P
	10	Search with non-existent keyword	attribute="type", keyword="FIRE" attribute="name", keyword="	ArrayList containing moves with "Fire" type	ArrayList containing moves with "Fire" type	P
	17	(negative)	NonExistentMove"	Empty ArrayList	Empty ArrayList	P
	18	Search with invalid attribute (negative)	attribute="invalid", keyword="test"	Empty ArrayList (no case matches)	Empty ArrayList (no case matches)	P
	10	Search with empty keyword (boundary)	attribute="name", keyword=""	ArrayList containing all moves (empty string matches all)	ArrayList containing all moves (empty string matches all)	D
	17	Search with empty keyword (boundary)	attribute="name", keyword="Tackle", empty	matches atty	materies atty	
	20	Search in empty moves list (boundary)	moves list	Empty ArrayList	Empty ArrayList	P
		Search with null keyword (boundary)	attribute="name", keyword=null	NullPointerException thrown	NullPointerException thrown	P
	22	Search with null attribute (boundary)	attribute=null, keyword="Tackle"	NullPointerException thrown	NullPointerException thrown	Р
	23	Search multiple matches	attribute="type", keyword="Normal", 3 Normal-type moves in list	ArrayList containing all 3 Normal-type moves	ArrayList containing all 3 Normal-type moves	Р
		·	attribute="name", keyword="Thunder-	ArrayList containing moves with names	ArrayList containing moves with names	
	24	Search with special characters in keyword	Punch"	containing "Thunder-Punch"	containing "Thunder-Punch"	P
	25	Search with numeric characters in keyword	attribute="classification" keyword="TM25"	ArrayList containing moves with classifications containing "TM25"	ArrayList containing moves with classifications containing "TM25"	P
addMove		Add valid move to empty list	Valid Moves object	Move added to list, list size = 1	Move added to list, list size = 1	P
			Valid Moves object, list already has 2			
		Add valid move to existing list	moves	Move added to list, list size = 3	Move added to list, list size = 3	P
	28	Add null move (boundary)	null Moves object	null added to list, list size increased by 1	null added to list, list size increased by 1	P
	29	Add multiple moves sequentially	3 different valid Moves objects added one by one	All 3 moves added to list, list size = 3	All 3 moves added to list, list size = 3	P
				Both instances added to list (duplicates	Both instances added to list (duplicates	
		Add duplicate move	Same Moves object added twice	allowed)	allowed)	P
		Add move with ampty string fields	Moves object with null name, type, etc. Moves object with empty strings for fields	Move added to list regardless of null fields	Move added to list regardless of null fields	P P
etMoves		Add move with empty string fields Get moves from populated list	List with 3 valid moves	Move added to list with empty string fields Returns ArrayList with 3 moves	Move added to list with empty string fields Returns ArrayList with 3 moves	P
,		Get moves from empty list (boundary)	Empty moves list	Returns empty ArrayList	Returns empty ArrayList	P
		Get moves after modifications	List modified by add/set operations	Returns current state of moves list	Returns current state of moves list	P
				Original list and returned list should be same	Original list and returned list should be	
	36	Get moves reference test	Check if returned list is same reference	reference	same reference	P
			Class: MovesFileHan	dler		
Method	#	Test Description	Sample Input Data	Expected Output	Actual Output	P/F
31/0		Save valid list of moves to file	ArrayList with 3 valid Moves objects	File created with moves data, "Successfully	File created with moves data, "Successfully	Р
ave	1	Save valid tist of moves to file	ArrayList with 5 valid Moves objects	saved!" message Empty file created, "Successfully saved!"	saved!" message Empty file created, "Successfully saved!"	P
	2	Save empty list of moves	Empty ArrayList <moves></moves>	message	message	P
	_	Savo list with pull mayor (harmaland)	Arraylict with 2 valid mayor and 4 mill	File with only 2 moves, null skipped,	File with only 2 moves, null skipped,	Р
		Save list with null moves (boundary)	ArrayList with 2 valid moves and 1 null	"Successfully saved!" message	"Successfully saved!" message	P
	3	. , , , ,		IOException caught, "An error occurred."	IOException caught, "An error occurred."	

	5	Save null list (boundary)	null ArrayList	NullPointerException or handled gracefully	NullPointerException or handled gracefully	P
		Save natt tist (boardary)	Existing "model/db/Moves.txt" with valid	ArrayList <moves> with correct move objects,</moves>	ArrayList <moves> with correct move</moves>	
load	6	Load valid moves file	data	"Successfully loaded!" message	objects, "Successfully loaded!" message	P
	,	Load from non-existent file (negative)	Non-existent file path	IOException caught, "An error occurred." message, empty ArrayList returned	IOException caught, "An error occurred." message, empty ArrayList returned	p
	,	Load from flori-existent file (flegative)	Non-existent life patri	Empty ArrayList <moves>, "Successfully</moves>	Empty ArrayList Noves>, "Successfully	Г
	8	Load from empty file (boundary)	Empty "model/db/Moves.txt" file	loaded!" message	loaded!" message	P
	9	Load file with malformed data (negative)	File with incomplete/invalid move data	Exception caught, "An error occurred." message	Exception caught, "An error occurred." message	P
	10	Load file with N/As tokens	File containing "N/As" values	ArrayList with Moves objects having null values where N/As found	ArrayList with Moves objects having null values where N/As found	p
	10	Edda He With N/AS tokens	The containing N/AS values	values where N/As round	values where 11/AS found	
			Class: FileHelper			
Method	#	Test Description	Sample Input Data	Expected Output	Actual Output	P/F
safe	1	Convert valid string	"Hello"	"Hello "	"Hello "	P
		Convert valid integer		"123 "	"123 "	P
		Convert valid double		"45.67 "	"45.67 "	P
		Convert null value (boundary)	null	"N/As " " "	"N/As " " "	P
fromSafe		Convert regular string	"Hello"	"Hello"	"Hello"	P
ITOIIISale		Convert regular string Convert N/As string	"N/As"	null	null	P
		Convert empty string (boundary)	III	mi .	IIII	P
		Convert null input (boundary)	null	null or NullPointerException	null or NullPointerException	P
		,				
			Class: InputHelper	•		
Method	#	Test Description	Sample Input Data	Expected Output	Actual Output	P/F
checkNA	1	Check valid non-N/A string	"Pikachu"	"Pikachu"	"Pikachu"	Р
	2	Check lowercase "n/a"	"n/a"	null	null	P
	3	Check uppercase "N/A"	"N/A"	null	null	P
	4	Check mixed case "N/a"	"N/a"	null	null	Р
	5	Check lowercase "na"	"na"	null	null	P
	6	Check uppercase "NA"	"NA"	null	null	P
	7	Check mixed case "Na"	"Na"	null	null	P
	8	Check empty string (boundary)	""	null	null	P
		Check whitespace string	" "	" " (not considered N/A)	" " (not considered N/A)	P
		Check null input (boundary)	null	NullPointerException or handled gracefully	NullPointerException or handled gracefully	Р
		Chack string with N/A substring	"Not N/A"	"Not N/A" (not exact match)	"Not N/A" (not exact match)	P
		Check string with N/A substring				-
		Check numeric string	"123"	"123"	"123"	P
						-
						-
Method			"123" Class: Trainer Sample Input Data	"123" Expected Output	"123" Actual Output	P P/F
Method Constructor (with ID)	# 1	Check numeric string Test Description Create trainer with valid parameters	"123" Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-01	"123" Expected Output Trainer object created with all fields set, lineup initia	"123" Actual Output Actual output alized as empty array, pokemonBox as empty Array	P P/F
Constructor (with ID)	# 1 2	Check numeric string Test Description Create trainer with valid parameters Create trainer with null name	Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-0! ID: 100002, name: null, other valid params	Expected Output Trainer object created with all fields set, lineup initia	"123" Actual Output Actual Output alized as empty array, pokemonBox as empty Array set correctly	P/F
Constructor (with ID) Constructor (without ID)	# 1 2 3	Check numeric string Test Description Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID	Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-0! ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe	Expected Output Trainer object created with all fields set, lineup inition Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from	"123" Actual Output Actual Output alized as empty array, pokemonBox as empty Array set correctly	P/F I P P
Constructor (with ID)	# 1 2 3 4	Check numeric string Test Description Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money	Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-01 ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fettrainer with money: 1000.0, amount: 500.0	Expected Output Trainer object created with all fields set, lineup initia Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from money becomes 1500.0	"123" Actual Output Actual Output alized as empty array, pokemonBox as empty Array set correctly	P/F I P P
Constructor (with ID) Constructor (without ID)	# 1 2 3 4 5	Check numeric string Test Description Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount	Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-0! ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: 0.0	Expected Output Trainer object created with all fields set, lineup initi. Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from money becomes 1500.0 money remains 1000.0	"123" Actual Output Actual Output alized as empty array, pokemonBox as empty Array set correctly	P/F I P P P P
Constructor (with ID) Constructor (without ID) addMoney	# 1 2 3 4 5 6	Check numeric string Test Description Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount	"123" Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-0! ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0	Expected Output Trainer object created with all fields set, lineup initi: Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from money becomes 1500.0 money remains 1000.0 money becomes 800.0	"123" Actual Output Actual Output alized as empty array, pokemonBox as empty Array set correctly	P/F LP P P P P
Constructor (with ID) Constructor (without ID)	# 1 2 3 4 5 6 7	Check numeric string Test Description Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds)	"123" Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-0! ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: 300.0	Expected Output Trainer object created with all fields set, lineup initi Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from money becomes 1500.0 money remains 1000.0 money becomes 800.0 returns true, money becomes 700.0	"123" Actual Output Actual Output alized as empty array, pokemonBox as empty Array set correctly	P/F I P P P P
Constructor (with ID) Constructor (without ID) addMoney	# 1 2 3 4 5 6	Check numeric string Test Description Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds) Deduct amount equal to current money	"123" Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-0: ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: 300.0 trainer with money: 1000.0, amount: 1000.0	Expected Output Trainer object created with all fields set, lineup initit Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from money becomes 1500.0 money remains 1000.0 money becomes 800.0 returns true, money becomes 700.0 returns true, money becomes 0.0	"123" Actual Output Actual Output alized as empty array, pokemonBox as empty Array set correctly	P P/F L P P P P P P P P
Constructor (with ID) Constructor (without ID) addMoney	# 1 2 3 4 5 6 7 8	Check numeric string Test Description Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds)	"123" Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-0! ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: 300.0	Expected Output Trainer object created with all fields set, lineup initi Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from money becomes 1500.0 money remains 1000.0 money becomes 800.0 returns true, money becomes 700.0	"123" Actual Output Actual Output alized as empty array, pokemonBox as empty Array set correctly	P P/F L P P P P P P P P P P P P P P P P P P
Constructor (with ID) Constructor (without ID) addMoney deductMoney	# 1 2 3 4 5 6 7 8 9	Check numeric string Test Description Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds) Deduct amount equal to current money Deduct amount exceeding current money	"123" Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-0: ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: 300.0 trainer with money: 1000.0, amount: 1000.0 trainer with money: 500.0, amount: 600.0	Expected Output Trainer object created with all fields set, lineup initit Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from money becomes 1500.0 money remains 1000.0 money becomes 800.0 returns true, money becomes 700.0 returns true, money becomes 0.0 returns false, money remains 500.0	"123" Actual Output Actual Output alized as empty array, pokemonBox as empty Array set correctly	P/F LP P P P P P P P P P
Constructor (with ID) Constructor (without ID) addMoney deductMoney	# 1 2 3 4 5 6 7 8 9 10	Check numeric string Test Description Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds) Deduct amount equal to current money Deduct amount exceeding current money Set valid Pokemon array	"123" Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-01 ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: -300.0 trainer with money: 1000.0, amount: 1000.0 trainer with money: 500.0, amount: 600.0 Pokemon array with 3 valid Pokemon objects	Expected Output Trainer object created with all fields set, lineup initit Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from money becomes 1500.0 money remains 1000.0 money becomes 800.0 returns true, money becomes 700.0 returns true, money becomes 0.0 returns false, money remains 500.0 pokemonLineup updated with new array	"123" Actual Output Actual Output alized as empty array, pokemonBox as empty Array set correctly	P/F I P P P P P P P P P P P P P P
Constructor (with ID) Constructor (without ID) addMoney deductMoney	# 1 2 3 4 5 6 7 8 9 10	Check numeric string Test Description Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds) Deduct amount equal to current money Deduct amount exceeding current money Set valid Pokemon array	"123" Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-0! ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: 300.0 trainer with money: 1000.0, amount: 1000.0 trainer with money: 500.0, amount: 600.0 Pokemon array with 3 valid Pokemon objects null Pokemon array	"123" Expected Output Trainer object created with all fields set, lineup initi. Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from money becomes 1500.0 money remains 1000.0 money becomes 800.0 returns true, money becomes 700.0 returns true, money becomes 0.0 returns false, money remains 500.0 pokemonLineup updated with new array pokemonLineup set to null	"123" Actual Output Actual Output alized as empty array, pokemonBox as empty Array set correctly	P/F I P P P P P P P P P P P P P P
Constructor (with ID) Constructor (without ID) addMoney deductMoney	# 1 1 2 2 3 4 4 5 5 6 6 7 7 8 8 9 10 11 1	Check numeric string Test Description Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds) Deduct amount exceeding current money Deduct amount exceeding current money Set valid Pokemon array Set null array	Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-0: 1D: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: 300.0 trainer with money: 1000.0, amount: 1000.0 trainer with money: 500.0, amount: 600.0 Pokemon array with 3 valid Pokemon objects null Pokemon array Class: TrainerManager	"123" Expected Output Trainer object created with all fields set, lineup initi. Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from money becomes 1500.0 money remains 1000.0 money becomes 800.0 returns true, money becomes 700.0 returns true, money becomes 0.0 returns false, money remains 500.0 pokemonLineup updated with new array pokemonLineup set to null	"123" Actual Output alized as empty array, pokemonBox as empty Array, set correctly n 100000), money set to 1000000 by default	P/F LP P P P P P P P P P P P P P P P P P P
Constructor (with ID) Constructor (without ID) addMoney deductMoney setPokemonLineup Method	# 1 2 3 4 5 6 7 8 9 10	Check numeric string Test Description Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds) Deduct amount equal to current money Deduct amount exceeding current money Set valid Pokemon array Set null array	"123" Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-0! ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: 300.0 trainer with money: 1000.0, amount: 1000.0 trainer with money: 500.0, amount: 600.0 Pokemon array with 3 valid Pokemon objects null Pokemon array	"123" Expected Output Trainer object created with all fields set, lineup initi Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from money becomes 1500.0 money remains 1000.0 money becomes 800.0 returns true, money becomes 700.0 returns true, money becomes 0.0 returns false, money remains 500.0 pokemonLineup updated with new array pokemonLineup set to null nent Expected Output	"123" Actual Output Actual Output alized as empty array, pokemonBox as empty Array set correctly	P/F I P P P P P P P P P P P P P P
Constructor (with ID) Constructor (without ID) addMoney deductMoney setPokemonLineup Method	# 1 1 2 2 3 3 4 4 5 5 6 6 7 8 8 9 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Check numeric string Test Description Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds) Deduct amount exceeding current money Deduct amount exceeding current money Set valid Pokemon array Set null array	Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-0: ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: 300.0 trainer with money: 500.0, amount: 1000.0 trainer with money: 500.0, amount: 600.0 Pokemon array with 3 valid Pokemon objects null Pokemon array Class: TrainerManager	"123" Expected Output Trainer object created with all fields set, lineup initi. Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from money becomes 1500.0 money remains 1000.0 money becomes 800.0 returns true, money becomes 700.0 returns true, money becomes 0.0 returns false, money remains 500.0 pokemonLineup updated with new array pokemonLineup set to null	"123" Actual Output alized as empty array, pokemonBox as empty Array, set correctly n 100000), money set to 1000000 by default	P/F P/F P P P P P P P P P P P P P P P
Constructor (with ID) Constructor (without ID) addMoney deductMoney setPokemonLineup Method	# 1 2 3 4 5 6 7 8 8 9 10 11	Test Description Create trainer with valid parameters Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds) Deduct amount equal to current money Deduct amount exceeding current money Set valid Pokemon array Set null array Test Description Add valid trainer to empty list	"123" Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-01 ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: 300.0 trainer with money: 1000.0, amount: 1000.0 trainer with money: 500.0, amount: 600.0 Pokemon array with 3 valid Pokemon objects null Pokemon array Class: TrainerManager Sample Input Data Valid Trainer object	Expected Output Trainer object created with all fields set, lineup initit Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from money becomes 1500.0 money remains 1000.0 money becomes 800.0 returns true, money becomes 700.0 returns true, money becomes 0.0 returns false, money remains 500.0 pokemonLineup updated with new array pokemonLineup set to null Expected Output trainer added to ArrayList, size becomes 1	"123" Actual Output alized as empty array, pokemonBox as empty Array, set correctly n 100000), money set to 1000000 by default	P/F I P P P P P P P P P P P P P P P P P P P
Constructor (with ID) Constructor (without ID) addMoney deductMoney setPokemonLineup Method addTrainer	# 1 2 3 4 5 6 7 8 8 9 10 11 1 1 2 2	Check numeric string Test Description Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds) Deduct amount equal to current money Deduct amount exceeding current money Set valid Pokemon array Set null array Test Description Add valid trainer to empty list Add multiple trainers	Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-01 ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: 1000.0 trainer with money: 1000.0, amount: 500.0 Class: Trainer with money: 500.0, amount: 600.0 Pokemon array with 3 valid Pokemon objects null Pokemon array Class: TrainerManager Sample Input Data Valid Trainer object 3 different valid Trainer objects null Trainer object	Expected Output Trainer object created with all fields set, lineup initit Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from money becomes 1500.0 money remains 1000.0 money becomes 800.0 returns true, money becomes 700.0 returns true, money becomes 0.0 returns false, money remains 500.0 pokemonLineup updated with new array pokemonLineup set to null Expected Output trainer added to ArrayList, size becomes 1 all trainers added, size becomes 3	Actual Output Actual Output Alized as empty array, pokemonBox as empty Array set correctly n 100000), money set to 1000000 by default Actual Output	P/F LP P P P P P P P P P P P P P P P P P P
Constructor (with ID) Constructor (without ID) addMoney deductMoney setPokemonLineup Method addTrainer	# 1 1 2 2 3 3 4 4 5 5 6 6 7 7 8 8 9 9 110 111 # 1 1 2 2 3 3	Test Description Create trainer with valid parameters Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds) Deduct amount equal to current money Deduct amount exceeding current money Set valid Pokemon array Set null array Test Description Add valid trainer to empty list Add multiple trainers Add null trainer	Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-01 ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: 1000.0 trainer with money: 1000.0, amount: 500.0 Class: Trainer with money: 500.0, amount: 600.0 Pokemon array with 3 valid Pokemon objects null Pokemon array Class: TrainerManager Sample Input Data Valid Trainer object 3 different valid Trainer objects null Trainer object	Expected Output Trainer object created with all fields set, lineup initit Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from oney becomes 1500.0 money becomes 1500.0 money becomes 800.0 returns true, money becomes 700.0 returns true, money becomes 0.0 returns false, money remains 500.0 pokemonLineup updated with new array pokemonLineup set to null Expected Output trainer added to ArrayList, size becomes 1 all trainers added, size becomes 3 null added to list (no validation) Pokemon added to trainer's pokemonBox, size becomes	Actual Output Actual Output Alized as empty array, pokemonBox as empty Array set correctly n 100000), money set to 1000000 by default Actual Output	P/F I P P P P P P P P P P P P P P P P P P P
Constructor (with ID) Constructor (without ID) addMoney deductMoney setPokemonLineup Method addTrainer	# 1 1 2 2 3 3 4 4 5 5 6 6 7 8 8 9 9 10 11 1 1 2 2 3 3 4 4	Test Description Create trainer with valid parameters Create trainer with valid parameters Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds) Deduct amount equal to current money Deduct amount exceeding current money Set valid Pokemon array Set null array Test Description Add valid trainer to empty list Add multiple trainers Add null trainer Add Pokemon to empty storage	Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-01 ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: 1000.0 trainer with money: 1000.0, amount: 600.0 Pokemon array with 3 valid Pokemon objects null Pokemon array Class: TrainerManager Sample Input Data Valid Trainer object 3 different valid Trainer objects null Trainer object trainer with empty pokemonBox, valid Pokemon	Expected Output Trainer object created with all fields set, lineup initit Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from oney becomes 1500.0 money becomes 1500.0 money becomes 800.0 returns true, money becomes 700.0 returns true, money becomes 0.0 returns false, money remains 500.0 pokemonLineup updated with new array pokemonLineup set to null Expected Output trainer added to ArrayList, size becomes 1 all trainers added, size becomes 3 null added to list (no validation) Pokemon added to trainer's pokemonBox, size becomes	Actual Output Actual Output Alized as empty array, pokemonBox as empty Array set correctly n 100000), money set to 1000000 by default Actual Output	P P/F I P P P P P P P P P P P P P P P P P P P
Constructor (with ID) Constructor (without ID) addMoney deductMoney setPokemonLineup Method addTrainer	# 1 2 2 3 4 4 5 5 6 6 7 7 8 8 9 10 11 1 2 2 3 3 4 4 5 5 6 6 7 7	Test Description Create trainer with valid parameters Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds) Deduct amount equal to current money Deduct amount exceeding current money Set valid Pokemon array Set null array Test Description Add valid trainer to empty list Add multiple trainers Add null trainer Add Pokemon to empty storage Add Pokemon to existing storage	Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-01 ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 500.0, amount: 600.0 Pokemon array with 3 valid Pokemon objects null Pokemon array Class: TrainerManager Sample Input Data Valid Trainer object 3 different valid Trainer objects null Trainer object trainer with empty pokemonBox, valid Pokemon trainer with 2 Pokemon in storage, new Pokemon	Expected Output Trainer object created with all fields set, lineup initit Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from money becomes 1500.0 money becomes 1500.0 money becomes 800.0 returns true, money becomes 700.0 returns true, money becomes 0.0 returns false, money remains 500.0 pokemonLineup updated with new array pokemonLineup set to null Expected Output trainer added to ArrayList, size becomes 1 all trainers added, size becomes 3 null added to list (no validation) Pokemon added to trainer's pokemonBox, size beco- Pokemon added, storage size becomes 3	Actual Output Actual Output Alized as empty array, pokemonBox as empty Array set correctly n 100000), money set to 1000000 by default Actual Output	P/F I P P P P P P P P P P P P P P P P P P P
Constructor (with ID) Constructor (without ID) addMoney deductMoney setPokemonLineup Method addTrainer addToStorage	# 1 1 2 2 3 3 4 4 5 5 6 6 7 8 8 9 10 11 1 2 2 3 3 4 4 5 5 6 6 7 8 8 7 8 8	Test Description Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds) Deduct amount equal to current money Deduct amount exceeding current money Set valid Pokemon array Set null array Test Description Add valid trainer to empty list Add multiple trainers Add null trainer Add Pokemon to empty storage Add Pokemon to existing storage Add null Pokemon to storage	Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-01 ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: -000.0 trainer with money: 500.0, amount: 600.0 Pokemon array with 3 valid Pokemon objects null Pokemon array Class: TrainerManager Sample Input Data Valid Trainer object 3 different valid Trainer objects null Trainer object trainer with empty pokemonBox, valid Pokemon trainer with 2 Pokemon in storage, new Pokemon trainer, null Pokemon	Expected Output Trainer object created with all fields set, lineup initit Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from money becomes 1500.0 money remains 1000.0 money becomes 800.0 returns true, money becomes 700.0 returns true, money becomes 0.0 returns false, money remains 500.0 pokemonLineup updated with new array pokemonLineup set to null Expected Output trainer added to ArrayList, size becomes 1 all trainers added, size becomes 3 null added to list (no validation) Pokemon added, storage size becomes 3 null added to storage	Actual Output Actual Output Alized as empty array, pokemonBox as empty Array set correctly n 100000), money set to 1000000 by default Actual Output	P/F I P P P P P P P P P P P P P P P P P P P
Constructor (with ID) Constructor (without ID) addMoney deductMoney setPokemonLineup Method addTrainer addToStorage canAddPokemon	# 1 2 2 3 3 4 4 5 5 6 6 7 8 8 9 9 10 11 1 2 2 3 3 4 4 5 5 6 6 7 8 8 9 9	Test Description Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds) Deduct amount equal to current money Deduct amount exceeding current money Set valid Pokemon array Set null array Test Description Add valid trainer to empty list Add multiple trainers Add null trainer Add Pokemon to empty storage Add Pokemon to existing storage Add null Pokemon to storage Check trainer with empty lineup Check trainer with partially filled lineup	Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-01 ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: 300.0 trainer with money: 1000.0, amount: 1000.0 trainer with money: 500.0, amount: 600.0 Pokemon array with 3 valid Pokemon objects null Pokemon array Class: TrainerManager Sample Input Data Valid Trainer object 3 different valid Trainer objects null Trainer object trainer with empty pokemonBox, valid Pokemon trainer with 2 Pokemon trainer, null Pokemon trainer with all lineup slots filled trainer with all 6 lineup slots filled trainer with 3 Pokemon in lineup, 3 null slots	Expected Output Trainer object created with all fields set, lineup initit Trainer object created with name = null, other fields Trainer object created with nuto-generated IID (starting frof money becomes 1500.0 money becomes 1500.0 money becomes 800.0 returns true, money becomes 700.0 returns true, money becomes 0.0 returns false, money remains 500.0 pokemonLineup updated with new array pokemonLineup set to null Expected Output trainer added to ArrayList, size becomes 1 all trainers added, size becomes 3 null added to list (no validation) Pokemon added, storage size becomes 3 null added to storage returns true returns false returns false returns false	Actual Output alized as empty array, pokemonBox as empty Array set correctly in 100000), money set to 1000000 by default Actual Output	P/F LP P P P P P P P P P P P P P P P P P P
Constructor (with ID) Constructor (without ID) addMoney deductMoney setPokemonLineup Method addTrainer addToStorage canAddPokemon	# 1 1 2 2 3 3 4 4 5 5 6 6 7 8 8 9 10 11 1 5 5 6 6 7 8 8 9 10 11 1 1 2 2 3 3 4 4 5 5 6 6 7 7 8 8 9 10 10 10 10 10 10 10 10 10 10 10 10 10	Test Description Create trainer with valid parameters Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds) Deduct amount equal to current money Deduct amount exceeding current money Set valid Pokemon array Set null array Test Description Add valid trainer to empty list Add multiple trainers Add null trainer Add Pokemon to existing storage Add null Pokemon to storage Check trainer with empty lineup Check trainer with full lineup Add Pokemon to empty tineup	Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-01 ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: 300.0 trainer with money: 1000.0, amount: 1000.0 trainer with money: 500.0, amount: 600.0 Pokemon array with 3 valid Pokemon objects null Pokemon array Class: TrainerManager Sample Input Data Valid Trainer object 3 different valid Trainer objects null Trainer object trainer with empty pokemonBox, valid Pokemon trainer with 2 Pokemon trainer with all lineup slots null trainer with all lineup slots filled trainer with all lineup slots filled trainer with 3 Pokemon in lineup, 3 null slots trainer with empty lineup, valid Pokemon	Expected Output Trainer object created with all fields set, lineup initit Trainer object created with name = null, other fields Trainer object created with auto-generated ID (starting frof money becomes 1500.0 money becomes 1500.0 money becomes 800.0 returns true, money becomes 700.0 returns true, money becomes 0.0 returns false, money remains 500.0 pokemonLineup updated with new array pokemonLineup set to null Expected Output trainer added to ArrayList, size becomes 1 all trainers added, size becomes 3 null added to list (no validation) Pokemon added to trainer's pokemonBox, size beco Pokemon added, storage size becomes 3 null added to storage returns true returns false returns true returns 1, Pokemon added to first slot, lineupCount	Actual Output alized as empty array, pokemonBox as empty Array set correctly in 100000), money set to 1000000 by default Actual Output	P/F LP P P P P P P P P P P P P P P P P P P
Constructor (with ID) Constructor (without ID) addMoney deductMoney setPokemonLineup Method addTrainer addToStorage canAddPokemon	# 1 2 2 3 4 4 5 5 6 6 7 8 8 9 10 11 5 5 6 6 7 8 8 9 10 11 1 1 1 2 1 1 2 1 1 2 1 1 1 1 1 1 1	Test Description Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds) Deduct amount equal to current money Deduct amount exceeding current money Set valid Pokemon array Set null array Test Description Add valid trainer to empty list Add multiple trainers Add null trainer Add Pokemon to empty storage Add Pokemon to existing storage Add null Pokemon to storage Check trainer with empty lineup Check trainer with partially filled lineup Add Pokemon to empty lineup Add Pokemon to empty lineup Add Pokemon to empty lineup	Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-01 ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: 300.0 trainer with money: 1000.0, amount: 1000.0 trainer with money: 500.0, amount: 600.0 Pokemon array with 3 valid Pokemon objects null Pokemon array Class: TrainerManager Sample Input Data Valid Trainer object 3 different valid Trainer objects null Trainer object trainer with empty pokemonBox, valid Pokemon trainer with 2 Pokemon in storage, new Pokemon trainer with all lineup slots null trainer with all lineup slots filled trainer with 3 Pokemon in lineup, 3 null slots trainer with empty lineup, valid Pokemon trainer with empty lineup, valid Pokemon	Expected Output Trainer object created with all fields set, lineup initit Trainer object created with name = null, other fields Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from money becomes 1500.0 money remains 1000.0 money becomes 800.0 returns true, money becomes 700.0 returns false, money remains 500.0 pokemonLineup updated with new array pokemonLineup set to null Expected Output trainer added to ArrayList, size becomes 1 all trainers added, size becomes 3 null added to list (no validation) Pokemon added to trainer's pokemonBox, size beco Pokemon added to storage returns true returns false returns true returns 1, Pokemon added to first slot, lineupCount returns 0, Pokemon added to storage instead	Actual Output alized as empty array, pokemonBox as empty Array set correctly in 100000), money set to 1000000 by default Actual Output	P/F LP P P P P P P P P P P P P P P P P P P
Constructor (with ID) Constructor (without ID) addMoney deductMoney setPokemonLineup Method addTrainer addToStorage canAddPokemon	# 1 2 2 3 4 4 5 5 6 6 7 8 8 9 10 11 1 2 2 3 4 4 5 5 6 6 7 7 8 8 9 10 11 12 12	Test Description Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds) Deduct amount equal to current money Deduct amount exceeding current money Set valid Pokemon array Set null array Test Description Add valid trainer to empty list Add multiple trainers Add null trainer Add Pokemon to empty storage Add Pokemon to existing storage Add null Pokemon to storage Check trainer with full lineup Check trainer with full lineup Add Pokemon to empty lineup Add Pokemon to empty lineup Add Pokemon to empty lineup Add Pokemon to full lineup Add Pokemon to full lineup	Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-01 ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: 300.0 trainer with money: 1000.0, amount: 1000.0 trainer with money: 500.0, amount: 600.0 Pokemon array with 3 valid Pokemon objects null Pokemon array Class: TrainerManager Sample Input Data Valid Trainer object 3 different valid Trainer objects null Trainer object trainer with empty pokemonBox, valid Pokemon trainer with 2 Pokemon in storage, new Pokemon trainer with 2 Pokemon in storage, new Pokemon trainer with all lineup slots filled trainer with 3 Pokemon in lineup, 3 null slots trainer with empty lineup, valid Pokemon trainer with 6 Pokemon in lineup, new Pokemon trainer with 9 Pokemon in lineup, new Pokemon trainer, null Pokemon	Expected Output Trainer object created with all fields set, lineup initit Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting frof money becomes 1500.0 money remains 1000.0 money becomes 800.0 returns true, money becomes 700.0 returns true, money becomes 0.0 returns false, money remains 500.0 pokemonLineup updated with new array pokemonLineup set to null Expected Output trainer added to ArrayList, size becomes 1 all trainers added, size becomes 3 null added to list (no validation) Pokemon added to trainer's pokemonBox, size beco Pokemon added, storage size becomes 3 null added to storage returns true returns false returns 1, Pokemon added to first slot, lineupCount' returns 0, Pokemon added to storage instead returns -1, no changes made	Actual Output alized as empty array, pokemonBox as empty Array set correctly in 100000), money set to 1000000 by default Actual Output actual Output	P/F I P P P P P P P P P P P P P P P P P P P
Constructor (with ID) Constructor (without ID) addMoney deductMoney setPokemonLineup Method addTrainer addToStorage canAddPokemon addPokemon	# 1 1 2 2 3 3 4 4 5 5 6 6 7 8 8 9 10 11 1 2 2 3 4 4 5 5 6 6 7 7 8 8 9 10 11 12 13	Test Description Create trainer with valid parameters Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds) Deduct amount equal to current money Deduct amount exceeding current money Set valid Pokemon array Set null array Test Description Add valid trainer to empty list Add multiple trainers Add null trainer Add Pokemon to empty storage Add null Pokemon to storage Check trainer with empty lineup Check trainer with partially filled lineup Add Pokemon to empty lineup Add Pokemon to empty lineup Add Pokemon to full lineup Add null Pokemon Add Pokemon when lineup has 5 Pokemon	Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-01 ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: 1000.0 trainer with money: 500.0, amount: 600.0 Pokemon array with 3 valid Pokemon objects null Pokemon array Class: TrainerManager Sample Input Data Valid Trainer object 3 different valid Trainer objects null Trainer object trainer with empty pokemonBox, valid Pokemon trainer with 2 Pokemon in storage, new Pokemon trainer with 21 lineup slots null trainer with 31 lineup slots filled trainer with 31 Pokemon in lineup, 3 null slots trainer with empty lineup, valid Pokemon trainer with 6 Pokemon in lineup, new Pokemon trainer, null Pokemon trainer, null Pokemon	Expected Output Trainer object created with all fields set, lineup initit Trainer object created with name = null, other fields Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting from money becomes 1500.0 money remains 1000.0 money remains 1000.0 returns true, money becomes 700.0 returns true, money becomes 0.0 returns false, money remains 500.0 pokemonLineup updated with new array pokemonLineup set to null Expected Output trainer added to ArrayList, size becomes 1 all trainers added, size becomes 3 null added to list (no validation) Pokemon added to trainer's pokemonBox, size beco Pokemon added, storage size becomes 3 null added to storage returns true returns false returns true returns 1, Pokemon added to first slot, lineupCount returns 0, Pokemon added to storage instead returns -1, no changes made	Actual Output alized as empty array, pokemonBox as empty Array set correctly in 100000), money set to 1000000 by default Actual Output actual Output	P/F I P P P P P P P P P P P P P P P P P P P
Constructor (with ID) Constructor (without ID) addMoney deductMoney setPokemonLineup Method addTrainer addToStorage canAddPokemon	# 1 2 2 3 4 4 5 5 6 6 7 8 8 9 10 11 1 2 2 3 4 4 5 5 6 6 7 7 8 8 9 10 11 12 12	Test Description Create trainer with valid parameters Create trainer with null name Create new trainer with auto-generated ID Add positive amount to money Add zero amount Add negative amount Deduct valid amount (sufficient funds) Deduct amount equal to current money Deduct amount exceeding current money Set valid Pokemon array Set null array Test Description Add valid trainer to empty list Add multiple trainers Add null trainer Add Pokemon to empty storage Add Pokemon to existing storage Add null Pokemon to storage Check trainer with full lineup Check trainer with full lineup Add Pokemon to empty lineup Add Pokemon to empty lineup Add Pokemon to empty lineup Add Pokemon to full lineup Add Pokemon to full lineup	Class: Trainer Sample Input Data ID: 100001, name: "Ash", birthDate: "1990-01-01 ID: 100002, name: null, other valid params name: "Misty", birthDate: "1992-05-05", sex: "Fe trainer with money: 1000.0, amount: 500.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: -200.0 trainer with money: 1000.0, amount: 300.0 trainer with money: 1000.0, amount: 1000.0 trainer with money: 500.0, amount: 600.0 Pokemon array with 3 valid Pokemon objects null Pokemon array Class: TrainerManager Sample Input Data Valid Trainer object 3 different valid Trainer objects null Trainer object trainer with empty pokemonBox, valid Pokemon trainer with 2 Pokemon in storage, new Pokemon trainer with 2 Pokemon in storage, new Pokemon trainer with all lineup slots filled trainer with 3 Pokemon in lineup, 3 null slots trainer with empty lineup, valid Pokemon trainer with 6 Pokemon in lineup, new Pokemon trainer with 9 Pokemon in lineup, new Pokemon trainer, null Pokemon	Expected Output Trainer object created with all fields set, lineup initit Trainer object created with name = null, other fields Trainer created with auto-generated ID (starting frof money becomes 1500.0 money remains 1000.0 money becomes 800.0 returns true, money becomes 700.0 returns true, money becomes 0.0 returns false, money remains 500.0 pokemonLineup updated with new array pokemonLineup set to null Expected Output trainer added to ArrayList, size becomes 1 all trainers added, size becomes 3 null added to list (no validation) Pokemon added to trainer's pokemonBox, size beco Pokemon added, storage size becomes 3 null added to storage returns true returns false returns 1, Pokemon added to first slot, lineupCount' returns 0, Pokemon added to storage instead returns -1, no changes made	Actual Output alized as empty array, pokemonBox as empty Array set correctly in 100000), money set to 1000000 by default Actual Output actual Output	P/F I P P P P P P P P P P P P P P P P P P P

	17	Switch to empty lineup slot (lineupIndex: -1)		p returns true, Pokemon moved from storage to first er	npty lineup slot	P
releasePokemon	18	Release Pokemon from lineup	trainer, Pokemon object in lineup	Pokemon removed from lineup, lineup shifted left		P
	19	Release Pokemon from storage	trainer, Pokemon object in storage	Pokemon removed from storage ArrayList		P
	20	Release Pokemon not owned by trainer	trainer, Pokemon not in lineup or storage	no changes made to trainer		P
•	21	Buy item with sufficient funds		returns positive value, money deducted, item added	o inventory	P
	23	Buy item with insufficient funds Buy item with zero quantity	trainer with 100 money, item costing 500, quantit trainer, valid item, quantity: 0	returns 0, no changes made		P
	24	Sell item trainer owns	trainer with item in inventory, valid quantity	returns true, money added, item quantity reduced in	inventory	P
	25	Sell item trainer doesn't own	trainer without item, item to sell	returns false, no changes made	inventory .	P
	26	Sell more items than owned	trainer with 2 of item, quantity to sell: 5	returns false, no changes made		P
	27	Use valid item on compatible Pokemon	trainer, Pokemon, compatible item (e.g., Potion)	returns true, item effect applied, item consumed from	n inventory	P P
	28	Use evolution stone on compatible Pokemon	trainer, Pokemon that can evolve, correct evolution			P
	29	Use item trainer doesn't have	trainer without item, Pokemon, item	returns false, no changes made		Р
	30	Use item on incompatible Pokemon	trainer, Pokemon, incompatible item	returns false, item not consumed		Р
		1	1			
			Class: TrainerContro	ller		
Method	#	Test Description	Sample Input Data	Expected Output	Actual Output	P/F
nandleViewTrainer	1	View trainers when list is not empty	TrainerManagement with 3 trainers	ArrayList <string> with 3 trainer info strings returne</string>	d	Р
	2	View trainers when list is empty	TrainerManagement with no trainers	empty ArrayList <string> returned</string>		Р
nandleSearchTrainer	3	Search by name with exact match	input: "Ash", attribute: "name"	ArrayList with matching trainer(s)		Р
	4	Search by name with no match	input: "Unknown", attribute: "name"	empty ArrayList returned		Р
	5	Search by ID with valid ID	input: "100001", attribute: "id"	ArrayList with matching trainer		Р
	6	Search with invalid attribute	input: "Ash", attribute: "invalid"	empty ArrayList or error handling		P
nandleAddPokemon	7	Add Pokemon to trainer with space	trainerId: "100001", dexNum: "25" (Pikachu)	Pokemon added to trainer's lineup, GUI updated		P
	8	Add Pokemon to trainer with full lineup	trainerId with 6 Pokemon, dexNum: "25"	Pokemon added to storage instead		P
	9	Add non-existent Pokemon	trainerId: "100001", dexNum: "999"	error message, no Pokemon added		P
handleAvailableItems	10	Get items from trainer with inventory	trainerId with items in inventory	ArrayList <string> with item descriptions</string>		P
	11	Get items from trainer with empty inventory	trainerId with no items	empty ArrayList <string></string>		P
handleAvailablePokemonF	12	Get Pokemon from trainer with multiple Pokemon	trainerId with 3 lineup + 2 storage Pokemon	ArrayList with 4 Pokemon (excluding 1 lineup to pro	event last Pokemon release)	P
	13	Get Pokemon from trainer with only 1 lineup Pok	trainerId with 1 lineup Pokemon only	ArrayList with only storage Pokemon (lineup Pokem	on excluded)	Р
	14	Get Pokemon from trainer with empty roster	trainerId with no Pokemon	empty ArrayList		P
	15					
	16					
	17					
	18					
			Class: GUIUtils			
Method	#	Test Description	Sample Input Data	Expected Output	Actual Output	P/F
createImageButton	1	Test Description Create button with valid image path		JButton created with image, positioned at (100,50), r	no borders/focus painting	Р
createImageButton	_	,	Sample Input Data		no borders/focus painting	P P
createImageButton	1	Create button with valid image path	Sample Input Data path: "assets/button.png", x: 100, y: 50	JButton created with image, positioned at (100,50), r	no borders/focus painting	Р
createImageButton	1 2 3	Create button with valid image path Create button with invalid image path	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200	JButton created with image, positioned at (100,50), I JButton created but may have no image or default in	no borders/focus painting nage	P P
createImageButton	1 2 3	Create button with valid image path Create button with invalid image path Create button with negative coordinates	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30	JButton created with image, positioned at (100,50), I JButton created but may have no image or default in JButton created at negative position	no borders/focus painting sage sis (640-width)/2), y: 200	P P P P
createImageButton createCenterImageButton createText	1 2 3 4 5 6	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200	JButton created with image, positioned at (100,50), t JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at	no borders/focus painting sage sis (640-width)/2), y: 200 an 640px	P P P P
createImageButton createCenterImageButton createText	1 2 3 4 5	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with very wide image	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100	JButton created with image, positioned at (100,50), IButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated a JButton created, x may be negative if image wider the	no borders/focus painting sage us (640-width)/2), y: 200 an 640px tly, red border visible	P P P P
createImageButton createCenterImageButton createText	1 2 3 4 5 6	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with very wide image Create text label with valid parameters	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 txt: "Hello World", x: 50, y: 100, w: 200, h: 30	JButton created with image, positioned at (100,50), I JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, x may be negative if image wider the JLabel created with text, positioned and sized correct	no borders/focus painting sage us (640-width)/2), y: 200 an 640px tly, red border visible	P P P P P P
createImageButton createCenterImageButton createText	1 2 3 4 5 6 7	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with very wide image Create text label with valid parameters Create text label with empty string	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 txt: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "", x: 50, y: 100, w: 200, h: 30	JButton created with image, positioned at (100,50), JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, x may be negative if image wider the JLabel created with text, positioned and sized correct JLabel created with no visible text, red border still visible text.	no borders/focus painting sage us (640-width)/2), y: 200 an 640px tly, red border visible	P P P P P P P P
createImageButton createCenterImageButton createText	1 2 3 4 5 6 7 8	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with very wide image Create text label with valid parameters Create text label with empty string Create text label with null text	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 txt: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "", x: 50, y: 100, w: 200, h: 30 txt: null, x: 50, y: 100, w: 200, h: 30	JButton created with image, positioned at (100,50), JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, x may be negative if image wider the JLabel created with text, positioned and sized correct JLabel created with no visible text, red border still visible created, may show "null" or empty	no borders/focus painting sage us (640-width)/2), y: 200 an 640px tly, red border visible	P P P P P P P P P
createImageButton createCenterImageButton createText createBanner	1 2 3 4 5 6 7 8	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with very wide image Create text label with valid parameters Create text label with empty string Create text label with null text Create banner with valid image	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 txt: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "", x: 50, y: 100, w: 200, h: 30 txt: null, x: 50, y: 100, w: 200, h: 30 path: "assets/banner.png", x: 0, y: 0	JButton created with image, positioned at (100,50), JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, x may be negative if image wider the JLabel created with text, positioned and sized correctly JLabel created with no visible text, red border still visuabel created, may show "null" or empty JLabel created with image at specified position	no borders/focus painting sage us (640-width)/2), y: 200 an 640px tly, red border visible	P P P P P P P P
createImageButton createCenterImageButton createText createBanner	1 2 3 4 5 6 7 8 9	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with very wide image Create text label with valid parameters Create text label with empty string Create text label with null text Create banner with valid image Create banner with invalid image path	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 txt: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "", x: 50, y: 100, w: 200, h: 30 txt: null, x: 50, y: 100, w: 200, h: 30 path: "assets/banner.png", x: 0, y: 0 path: "nonexistent.png", x: 0, y: 0	JButton created with image, positioned at (100,50), JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, x may be negative if image wider the JLabel created with text, positioned and sized correct JLabel created with no visible text, red border still visuable created, may show "null" or empty JLabel created with image at specified position JLabel created but may not display image	no borders/focus painting nage as (640-width)/2), y: 200 an 640px tly, red border visible sible	P P P P P P P P P P P P P
createImageButton createCenterImageButton createText createBanner createCenterBanner	1 2 3 4 5 6 7 8 9 10	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with very wide image Create text label with valid parameters Create text label with empty string Create text label with null text Create banner with valid image Create banner with invalid image path Create centered banner	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 txt: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "", x: 50, y: 100, w: 200, h: 30 txt: null, x: 50, y: 100, w: 200, h: 30 path: "assets/banner.png", x: 0, y: 0 path: "nonexistent.png", x: 0, y: 0 path: "assets/title.png", y: 50	JButton created with image, positioned at (100,50), JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, x may be negative if image wider the JLabel created with text, positioned and sized correct JLabel created with no visible text, red border still visuable created, may show "null" or empty JLabel created with image at specified position JLabel created but may not display image JLabel with image, horizontally centered, y: 50	no borders/focus painting sage sage sage sage sage sage sage sag	P P P P P P P P P P P P
createImageButton createCenterImageButton createText createBanner createCenterBanner	1 2 3 4 5 6 7 8 9 10 11	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with very wide image Create text label with valid parameters Create text label with empty string Create text label with null text Create banner with valid image Create banner with invalid image Create centered banner Create centered banner	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 txt: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "null, x: 50, y: 100, w: 200, h: 30 path: "assets/banner.png", x: 0, y: 0 path: "assets/banner.png", x: 0, y: 0 path: "assets/banner.png", x: 0, y: 0 path: "assets/title.png", y: 50 path: "assets/wide_title.png", y: 50	JButton created with image, positioned at (100,50), I JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated of JButton created, x may be negative if image wider the JLabel created with text, positioned and sized correct JLabel created with no visible text, red border still visuable created, may show "null" or empty JLabel created with image at specified position JLabel created but may not display image JLabel with image, horizontally centered, y: 50 JLabel created, x may be negative if image wider that	no borders/focus painting sage sage sage sage sage sage sage sag	P P P P P P P P P P P P P
createImageButton createCenterImageButton createText createBanner createCenterBanner	1 2 3 4 5 6 7 8 9 10 11 12	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with very wide image Create text label with valid parameters Create text label with empty string Create text label with null text Create banner with valid image Create banner with vialid image Create centered banner Create centered banner Create centered banner with very wide image Create text field with valid dimensions	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 txt: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "", x: 50, y: 100, w: 200, h: 30 txt: null, x: 50, y: 100, w: 200, h: 30 path: "assets/banner.png", x: 0, y: 0 path: "nonexistent.png", x: 0, y: 0 path: "assets/title.png", y: 50 path: "assets/wide_title.png", y: 50 x: 100, y: 150, w: 200, h: 25	JButton created with image, positioned at (100,50), I JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, x may be negative if image wider the JLabel created with text, positioned and sized correct JLabel created with no visible text, red border still villabel created, may show "null" or empty JLabel created with image at specified position JLabel created but may not display image JLabel with image, horizontally centered, y: 50 JLabel created, x may be negative if image wider the JTextField created with red border, transparent backgrounds.	no borders/focus painting stage stag	P P P P P P P P P P P P P P P
createImageButton createCenterImageButton createText createBanner createCenterBanner	1 2 3 4 5 6 7 8 9 10 11 12 13	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with very wide image Create text label with valid parameters Create text label with valid parameters Create text label with null text Create banner with valid image Create banner with invalid image path Create centered banner Create centered banner Create centered banner Create text field with valid dimensions Create text field with valid dimensions	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 txt: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "", x: 50, y: 100, w: 200, h: 30 txt: null, x: 50, y: 100, w: 200, h: 30 path: "assets/banner.png", x: 0, y: 0 path: "assets/binner.png", x: 0, y: 0 path: "assets/title.png", y: 50 path: "assets/wide_title.png", y: 50 x: 100, y: 150, w: 200, h: 25 x: 100, y: 150, w: 0, h: 0	JButton created with image, positioned at (100,50), I JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, with text, positioned and sized correct of JLabel created with no visible text, red border still villabel created with no visible text, red border still villabel created with image at specified position JLabel created with image at specified position JLabel created but may not display image JLabel with image, horizontally centered, y: 50 JLabel created, x may be negative if image wider the JTextField created with red border, transparent backg JTextField created but not visible due to zero size	no borders/focus painting stage stag	P P P P P P P P P P P P P P P P
createImageButton createCenterImageButton createText createBanner createCenterBanner	1 2 3 4 5 6 7 8 9 10 11 12 13	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with very wide image Create text label with valid parameters Create text label with valid parameters Create text label with null text Create banner with valid image Create banner with invalid image path Create centered banner Create centered banner Create centered banner Create text field with valid dimensions Create text field with valid dimensions	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 txt: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "", x: 50, y: 100, w: 200, h: 30 txt: null, x: 50, y: 100, w: 200, h: 30 path: "assets/banner.png", x: 0, y: 0 path: "assets/binner.png", x: 0, y: 0 path: "assets/title.png", y: 50 path: "assets/wide_title.png", y: 50 x: 100, y: 150, w: 200, h: 25 x: 100, y: 150, w: 0, h: 0	JButton created with image, positioned at (100,50), I JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, with text, positioned and sized correct of JLabel created with no visible text, red border still villabel created with no visible text, red border still villabel created with image at specified position JLabel created with image at specified position JLabel created but may not display image JLabel with image, horizontally centered, y: 50 JLabel created, x may be negative if image wider the JTextField created with red border, transparent backg JTextField created but not visible due to zero size	no borders/focus painting stage stag	P P P P P P P P P P P P P P P P
createImageButton createCenterImageButton createText createBanner	1 2 3 4 5 6 7 8 9 10 11 12 13	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with very wide image Create text label with valid parameters Create text label with valid parameters Create text label with null text Create banner with valid image Create banner with invalid image path Create centered banner Create centered banner Create centered banner Create text field with valid dimensions Create text field with valid dimensions	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 txt: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "", x: 50, y: 100, w: 200, h: 30 txt: null, x: 50, y: 100, w: 200, h: 30 path: "assets/banner.png", x: 0, y: 0 path: "assets/binner.png", x: 0, y: 0 path: "assets/title.png", y: 50 path: "assets/wide_title.png", y: 50 x: 100, y: 150, w: 200, h: 25 x: 100, y: 150, w: 0, h: 0	JButton created with image, positioned at (100,50), I JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, with text, positioned and sized correct of JLabel created with no visible text, red border still villabel created with no visible text, red border still villabel created with image at specified position JLabel created with image at specified position JLabel created but may not display image JLabel with image, horizontally centered, y: 50 JLabel created, x may be negative if image wider the JTextField created with red border, transparent backg JTextField created but not visible due to zero size	no borders/focus painting stage stag	P P P P P P P P P P P P P P P P
createImageButton createCenterImageButton createText createBanner	1 2 3 4 5 6 7 8 9 10 11 12 13	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with very wide image Create text label with valid parameters Create text label with valid parameters Create text label with null text Create banner with valid image Create banner with invalid image path Create centered banner Create centered banner Create centered banner Create text field with valid dimensions Create text field with valid dimensions	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 txt: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "", x: 50, y: 100, w: 200, h: 30 txt: null, x: 50, y: 100, w: 200, h: 30 path: "assets/banner.png", x: 0, y: 0 path: "nonexistent.png", x: 0, y: 0 path: "assets/wide_title.png", y: 50 x: 100, y: 150, w: 200, h: 25 x: 100, y: 150, w: 0, h: 0 x: 100, y: 150, w: -50, h: -25	JButton created with image, positioned at (100,50), I JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, with text, positioned and sized correct of JLabel created with no visible text, red border still villabel created with no visible text, red border still villabel created with image at specified position JLabel created with image at specified position JLabel created but may not display image JLabel with image, horizontally centered, y: 50 JLabel created, x may be negative if image wider the JTextField created with red border, transparent backg JTextField created but not visible due to zero size	no borders/focus painting stage stag	P P P P P P P P P P P P P P P P
createImageButton createCenterImageButton createText createBanner createCenterBanner createCenterBanner	1 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 15	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with valid image Create text label with valid parameters Create text label with empty string Create text label with mull text Create banner with valid image Create banner with invalid image path Create centered banner Create centered banner Create centered banner with very wide image Create text field with valid dimensions Create text field with zero dimensions Create text field with negative dimensions Create text field with negative dimensions	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 txt: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "null, x: 50, y: 100, w: 200, h: 30 path: "assets/banner.png", x: 0, y: 0 path: "assets/banner.png", x: 0, y: 0 path: "assets/banner.png", x: 0, y: 0 path: "assets/title.png", y: 50 path: "assets/wide_title.png", y: 50 x: 100, y: 150, w: 200, h: 25 x: 100, y: 150, w: -50, h: -25 Class: MainGUI	JButton created with image, positioned at (100,50), I JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, horizontally centered (x calculated at JButton created, x may be negative if image wider the JLabel created with text, positioned and sized correct JLabel created with no visible text, red border still visuable created, may show "null" or empty JLabel created with image at specified position JLabel created but may not display image JLabel with image, horizontally centered, y: 50 JLabel created, x may be negative if image wider the JTextField created with red border, transparent backy JTextField created but not visible due to zero size JTextField created with unusual behavior due to negative in the size of the s	no borders/focus painting hage Is (640-width)/2), y: 200 an 640px tty, red border visible sible In 640px ground, positioned correctly attive dimensions	P P P P P P P P P P P P P P P P P P P
createImageButton createCenterImageButton createText createBanner createCenterBanner createTextField Method	1 2 3 4 5 6 7 8 9 10 11 12 13	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with very wide image Create text label with valid parameters Create text label with empty string Create text label with null text Create banner with valid image Create banner with invalid image path Create centered banner Create centered banner Create text field with valid dimensions Create text field with zero dimensions Create text field with negative dimensions Create text field with negative dimensions	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 txt: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "", x: 50, y: 100, w: 200, h: 30 txt: null, x: 50, y: 100, w: 200, h: 30 path: "assets/banner.png", x: 0, y: 0 path: "nonexistent.png", x: 0, y: 0 path: "assets/wide_title.png", y: 50 x: 100, y: 150, w: 200, h: 25 x: 100, y: 150, w: 0, h: 0 x: 100, y: 150, w: -50, h: -25	JButton created with image, positioned at (100,50), I JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, x may be negative if image wider the JLabel created with text, positioned and sized correct JLabel created with no visible text, red border still viable created with mage at specified position JLabel created with image at specified position JLabel created but may not display image JLabel with image, horizontally centered, y: 50 JLabel created, x may be negative if image wider the JTextField created with red border, transparent backgorder of the position JLabel created with red border, transparent backgorder of the position JExtField created but not visible due to zero size JTextField created with unusual behavior due to negative if image wider that the position of the p	no borders/focus painting hage las (640-width)/2), y: 200 an 640px ttly, red border visible sible n 640px ground, positioned correctly attive dimensions Actual Output	P P P P P P P P P P P P P P P P P P P
createImageButton createCenterImageButton createText createBanner createCenterBanner createTextField Method	1 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 15	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with valid image Create text label with valid parameters Create text label with until text Create banner with valid image Create banner with vialid image Create banner with invalid image path Create centered banner Create centered banner Create text field with valid dimensions Create text field with zero dimensions Create text field with negative dimensions Create text field with negative dimensions	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 txt: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "null, x: 50, y: 100, w: 200, h: 30 path: "assets/banner.png", x: 0, y: 0 path: "assets/banner.png", x: 0, y: 0 path: "assets/banner.png", x: 0, y: 0 path: "assets/title.png", y: 50 path: "assets/wide_title.png", y: 50 x: 100, y: 150, w: 200, h: 25 x: 100, y: 150, w: -50, h: -25 Class: MainGUI	JButton created with image, positioned at (100,50), I JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, horizontally centered (x calculated at JButton created, x may be negative if image wider the JLabel created with text, positioned and sized correct JLabel created with no visible text, red border still visuable created, may show "null" or empty JLabel created with image at specified position JLabel created but may not display image JLabel with image, horizontally centered, y: 50 JLabel created, x may be negative if image wider the JTextField created with red border, transparent backy JTextField created but not visible due to zero size JTextField created with unusual behavior due to negative in the size of the s	no borders/focus painting hage las (640-width)/2), y: 200 an 640px ttly, red border visible sible n 640px ground, positioned correctly attive dimensions Actual Output	P P P P P P P P P P P P P P P P P P P
createImageButton createCenterImageButton createText createBanner createCenterBanner createTextField Method showTrainer	1 2 3 4 5 6 7 8 8 9 10 11 12 13 14 15	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with very wide image Create text label with valid parameters Create text label with empty string Create text label with null text Create banner with valid image Create banner with invalid image path Create centered banner Create centered banner Create text field with valid dimensions Create text field with zero dimensions Create text field with negative dimensions Create text field with negative dimensions	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 txt: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "null, x: 50, y: 100, w: 200, h: 30 txt: null, x: 50, y: 100, w: 200, h: 30 path: "assets/banner.png", x: 0, y: 0 path: "nonexistent.png", x: 0, y: 0 path: "assets/banner.png", x: 0, y: 0 path: "assets/title.png", y: 50 path: "assets/wide_title.png", y: 50 x: 100, y: 150, w: 200, h: 25 x: 100, y: 150, w: 0, h: 0 x: 100, y: 150, w: -50, h: -25	JButton created with image, positioned at (100,50), I JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, x may be negative if image wider the JLabel created with text, positioned and sized correct JLabel created with no visible text, red border still viable created with mage at specified position JLabel created with image at specified position JLabel created but may not display image JLabel with image, horizontally centered, y: 50 JLabel created, x may be negative if image wider the JTextField created with red border, transparent backgorder of the position JLabel created with red border, transparent backgorder of the position JExtField created but not visible due to zero size JTextField created with unusual behavior due to negative if image wider that the position of the p	no borders/focus painting hage las (640-width)/2), y: 200 lan 640px lty, red border visible sible lan 640px ground, positioned correctly lative dimensions Actual Output Pokemon lineup visible	P P P P P P P P P P P P P P P P P P P
createImageButton createCenterImageButton createText createBanner createCenterBanner createTextField Method showTrainer	1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with valid image Create text label with valid parameters Create text label with valid parameters Create text label with null text Create banner with valid image Create banner with vialid image path Create centered banner Create centered banner Create centered banner Create text field with valid dimensions Create text field with zero dimensions Create text field with negative dimensions Create text field with negative dimensions Create text field with negative dimensions Create text field with valid dimensions Create text field with negative dimensions	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 txt: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "", x: 50, y: 100, w: 200, h: 30 path: "assets/banner.png", x: 0, y: 0 path: "assets/title.png", y: 50 x: 100, y: 150, w: 200, h: 25 x: 100, y: 150, w: 0, h: 0 x: 100, y: 150, w: -50, h: -25 Class: MainGUI Sample Input Data String array with complete trainer info	JButton created with image, positioned at (100,50), I JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, horizontally centered (x calculated at JButton created, x may be negative if image wider the JLabel created with text, positioned and sized correct JLabel created with no visible text, red border still visuable created with image at specified position JLabel created with image at specified position JLabel created but may not display image JLabel with image, horizontally centered, y: 50 JLabel created, x may be negative if image wider the JTextField created with red border, transparent backgover and the still restricted of the properties of the pr	no borders/focus painting hage las (640-width)/2), y: 200 lan 640px lty, red border visible sible lan 640px ground, positioned correctly lative dimensions Actual Output Pokemon lineup visible	P P P P P P P P P P P P P P P P P P P
createImageButton createCenterImageButton createText createBanner createCenterBanner createTextField Method showTrainer	1 2 3 4 4 5 6 6 7 8 8 9 10 11 12 13 14 15 ## 1 2	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with valid image Create text label with valid parameters Create text label with valid parameters Create text label with null text Create banner with valid image Create banner with invalid image path Create centered banner Create centered banner Create text field with valid dimensions Create text field with valid dimensions Create text field with negative dimensions Create text field with negative dimensions Create text field with negative dimensions Create text field with valid dimensions Create text field with valid dimensions	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: 50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 txt: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "", x: 50, y: 100, w: 200, h: 30 path: "assets/banner.png", x: 0, y: 0 path: "assets/banner.png", x: 0, y: 0 path: "assets/title.png", y: 50 path: "assets/title.png", y: 50 x: 100, y: 150, w: 200, h: 25 x: 100, y: 150, w: 0, h: 0 x: 100, y: 150, w: -50, h: -25 Class: MainGUI Sample Input Data String array with complete trainer info String array with some null entries	JButton created with image, positioned at (100,50), t JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, x may be negative if image wider th JLabel created with text, positioned and sized correc JLabel created with no visible text, red border still vi JLabel created with image at specified position JLabel created but may not display image JLabel with image, horizontally centered, y: 50 JLabel created, x may be negative if image wider tha JTextField created with red border, transparent backg JTextField created but not visible due to zero size JTextField created with unusual behavior due to negative if image wider that the size of th	no borders/focus painting hage las (640-width)/2), y: 200 lan 640px lty, red border visible sible lan 640px ground, positioned correctly lative dimensions Actual Output Pokemon lineup visible	P P P P P P P P P P P P P P P P P P P
createImageButton createCenterImageButton createText createBanner createCenterBanner createTextField Method showTrainer	1 2 3 3 4 4 5 5 6 6 7 7 8 8 9 10 11 12 13 14 15 1 1 2 2 3 3	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with valid image Create text label with valid parameters Create text label with valid parameters Create text label with null text Create banner with valid image Create banner with invalid image path Create centered banner Create centered banner Create text field with valid dimensions Create text field with valid dimensions Create text field with negative dimensions Create text field with negative dimensions Test Description Display trainer with valid data Display trainer with null values in info Display trainer with empty Pokemon lineup	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: -50, y: -30 path: "assets/button.png", y: 200 path: "assets/button.png", y: 100 txt: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "", x: 50, y: 100, w: 200, h: 30 txt: null, x: 50, y: 100, w: 200, h: 30 path: "assets/banner.png", x: 0, y: 0 path: "assets/banner.png", x: 0, y: 0 path: "assets/title.png", y: 50 path: "assets/wide_title.png", y: 50 x: 100, y: 150, w: 200, h: 25 x: 100, y: 150, w: -50, h: -25 Class: MainGUI Sample Input Data String array with some null entries Trainer info with no Pokemon in lineup	JButton created with image, positioned at (100,50), t JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, x may be negative if image wider th JLabel created with text, positioned and sized correc JLabel created with no visible text, red border still v JLabel created with may show "null" or empty JLabel created with image at specified position JLabel created but may not display image JLabel with image, horizontally centered, y: 50 JLabel created, x may be negative if image wider the JTextField created with red border, transparent backg JTextField created but not visible due to zero size JTextField created with unusual behavior due to neg Expected Output Trainer screen displayed with all fields, buttons, and Screen displayed with empty/default values for null Screen displayed with empty lineup buttons	no borders/focus painting large las (640-width)/2), y: 200 lan 640px lty, red border visible sible las (640px lty, red border visible sible las (640px lty, red border visible las (640px lty,	P P P P P P P P P P P P P P P P P P P
createImageButton createCenterImageButton createText createBanner createCenterBanner createTextField Method showTrainer	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with valid image Create text label with valid parameters Create text label with valid parameters Create text label with null text Create banner with valid image Create banner with invalid image path Create centered banner Create centered banner Create text field with valid dimensions Create text field with valid dimensions Create text field with negative dimensions Create text field with negative dimensions Create text field with negative dimensions Create text field with negative dimensions Create text field with valid data Display trainer with valid data Display trainer with null values in info Display trainer with empty Pokemon lineup Display list with multiple items	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: 50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 txt: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "", x: 50, y: 100, w: 200, h: 30 txt: null, x: 50, y: 100, w: 200, h: 30 path: "assets/banner.png", x: 0, y: 0 path: "assets/banner.png", x: 0, y: 0 path: "assets/title.png", y: 50 path: "assets/wide_title.png", y: 50 x: 100, y: 150, w: 200, h: 25 x: 100, y: 150, w: -50, h: -25 Class: MainGUI Sample Input Data String array with complete trainer info String array with some null entries Trainer info with no Pokemon in lineup ArrayList with 5 items, valid paths	JButton created with image, positioned at (100,50), t JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, x may be negative if image wider th JLabel created with text, positioned and sized correc JLabel created with no visible text, red border still v JLabel created with image at specified position JLabel created with image at specified position JLabel created but may not display image JLabel with image, horizontally centered, y: 50 JLabel created, x may be negative if image wider the JTextField created with red border, transparent backg JTextField created but not visible due to zero size JTextField created with unusual behavior due to neg Expected Output Trainer screen displayed with all fields, buttons, and Screen displayed with empty/default values for null Screen displayed with empty lineup buttons Scrollable list displayed with all items as buttons	no borders/focus painting sage sage sage sage sage sage sage sag	P P P P P P P P P P P P P P P P P P P
createImageButton createCenterImageButton createText createBanner createCenterBanner createTextField Method showTrainer	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with very wide image Create text label with valid parameters Create text label with valid parameters Create text label with null text Create banner with valid image Create banner with invalid image path Create centered banner Create centered banner Create centered banner Create text field with valid dimensions Create text field with paid dimensions Create text field with negative dimensions Create text field with negative dimensions Create text field with negative dimensions Display trainer with valid data Display trainer with null values in info Display trainer with empty Pokemon lineup Display list with multiple items	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: 50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 tx: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "", x: 50, y: 100, w: 200, h: 30 txt: null, x: 50, y: 100, w: 200, h: 30 path: "assets/banner.png", x: 0, y: 0 path: "assets/banner.png", x: 0, y: 0 path: "assets/title.png", y: 50 path: "assets/wide_title.png", y: 50 x: 100, y: 150, w: 200, h: 25 x: 100, y: 150, w: -50, h: -25 Class: MainGUl Sample Input Data String array with complete trainer info String array with some null entries Trainer info with no Pokemon in lineup ArrayList with 5 items, valid paths Empty ArrayList, valid paths	JButton created with image, positioned at (100,50), t JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, x may be negative if image wider th JLabel created with text, positioned and sized correc JLabel created with no visible text, red border still v JLabel created with image at specified position JLabel created with image at specified position JLabel created but may not display image JLabel created but may not display image JLabel created, x may be negative if image wider the JTextField created with red border, transparent back; JTextField created but not visible due to zero size JTextField created with unusual behavior due to negative if image wider the strength of the created with unusual behavior due to negative if image wider the strength of the created with unusual behavior due to negative if image wider the strength of the created with unusual behavior due to negative if image wider the strength of the created with unusual behavior due to negative in the strength of the created with unusual behavior due to negative in the strength of the strength o	as (640-width)/2), y: 200 an 640px dly, red border visible sible an 640px ground, positioned correctly ative dimensions Actual Output Pokemon lineup visible entries buttons screen	P P P P P P P P P P P P P P P P P P P
createImageButton createCenterImageButton createText createBanner createCenterBanner createTextField Method showTrainer showViewScreen	1 2 3 4 5 6 7 8 8 9 10 11 11 12 13 14 15 15 15 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	Create button with valid image path Create button with invalid image path Create button with negative coordinates Create centered button with valid image Create centered button with valid image Create text label with valid parameters Create text label with valid parameters Create text label with null text Create banner with valid image Create banner with valid image path Create centered banner Create centered banner Create centered banner Create text field with valid dimensions Create text field with valid dimensions Create text field with regative dimensions Create text field with negative dimensions Create text field with negative dimensions Display trainer with valid data Display trainer with null values in info Display trainer with empty Pokemon lineup Display list with multiple items Display list with "release" backPath	Sample Input Data path: "assets/button.png", x: 100, y: 50 path: "invalid/path.png", x: 100, y: 50 path: "assets/button.png", x: 50, y: -30 path: "assets/button.png", y: 200 path: "assets/wide_button.png", y: 100 tx: "Hello World", x: 50, y: 100, w: 200, h: 30 txt: "i", x: 50, y: 100, w: 200, h: 30 txt: null, x: 50, y: 100, w: 200, h: 30 path: "assets/banner.png", x: 0, y: 0 path: "assets/banner.png", x: 0, y: 0 path: "assets/title.png", x: 0, y: 0 path: "assets/wide_title.png", y: 50 x: 100, y: 150, w: 200, h: 25 x: 100, y: 150, w: -50, h: -25 Class: MainGUl Sample Input Data String array with some null entries Trainer info with no Pokemon in lineup ArrayList with 5 items, valid paths Empty ArrayList, valid paths Empty ArrayList, valid paths	JButton created with image, positioned at (100,50), t JButton created but may have no image or default in JButton created at negative position JButton created, horizontally centered (x calculated at JButton created, x may be negative if image wider th JLabel created with text, positioned and sized correc JLabel created with no visible text, red border still v JLabel created, may show "null" or empty JLabel created with image at specified position JLabel created but may not display image JLabel created but may not display image JLabel created with image, horizontally centered, y: 50 JLabel created, x may be negative if image wider the JTextField created with red border, transparent back, JTextField created but not visible due to zero size JTextField created with unusual behavior due to negative if image wider the strength of the created with unusual behavior due to negative if image wider the strength of the created with unusual behavior due to negative if image wider the strength of the created with unusual behavior due to negative if image wider the strength of the created with unusual behavior due to negative if image wider the strength of the created with unusual behavior due to negative if image wider the strength of the created with unusual behavior due to negative if image wider the strength of the created with unusual behavior due to negative if image wider the strength of the created with unusual behavior due to negative if image wider the strength of the created with unusual behavior due to negative if image wider the strength of the created with unusual behavior due to negative if image wider the strength of the created with unusual behavior due to negative if image wider the strength of the created with unusual behavior due to negative if image wider the strength of the created with unusual behavior due to negative if image wider the strength of the created with unusual behavior due to negative if image wider the strength of the created with unusual behavior due to negative if image wider the strengt	as (640-width)/2), y: 200 an 640px dly, red border visible sible an 640px ground, positioned correctly ative dimensions Actual Output Pokemon lineup visible entries buttons screen	P P P P P P P P P P P P P P P P P P P