

Assignment 4		Student: Austin Major	
Max Value	Earned Value	Check Marks	Instructor Comments
Accuracy (100)			
15	15	<i>Grain</i> class implements: <ul style="list-style-type: none"> Constructors / Destructor Accessors to return average test weight and ideal moisture level constants Accessors to return moisture level and foreign material values 	
10	10	<i>Ticket</i> class implements: <ul style="list-style-type: none"> Timestamp: <ul style="list-style-type: none"> ✓ Set in constructors ✓ Accessor to return value ✓ Formatted in the return value of toString() <i>Grain</i> sample member variable <ul style="list-style-type: none"> ✓ Uses sample member variable for grain's moisture level and foreign material 	
40	36	<i>Tickets</i> class implements: <ul style="list-style-type: none"> Default constructor: <ul style="list-style-type: none"> ✓ Sets initial size and capacity ✓ Allocates dynamic array based on capacity Copy constructor: <ul style="list-style-type: none"> ✓ Sets size and capacity based on object to be copied ✓ Allocates dynamic array based on capacity of array within object to be copied ✓ Copies individual elements to newly allocated dynamic array based on size of array within object to be copied Destructor: <ul style="list-style-type: none"> ✓ Frees memory for dynamic array add(): <ul style="list-style-type: none"> ✓ Tests whether capacity of dynamic array needs increased, no unused elements remain to add <i>Ticket</i> object (size == capacity) if capacity needs increased: <ul style="list-style-type: none"> ▪ Saves memory pointer to existing (old) dynamic array ▪ Increases capacity by a reasonable amount (adds a constant) ▪ Allocates dynamic array based on increased capacity ▪ Copies individual elements to newly allocated dynamic array from existing (old) dynamic array (based on size) using 	<p>Overloaded assignment operator does not free memory for dynamic array prior to allocating new array, thus leading to a memory leak.</p> <p>In the add() function, suggest you delay incrementing ticketArraySize until the end of the function, then you won't need to always subtract one from it.</p>

		<p>saved memory pointer</p> <ul style="list-style-type: none"> ▪ Frees memory to existing (old) dynamic array using saved memory pointer ✓ Adds Ticket object to next available element within dynamic array (based on size) and increments size • size(): <ul style="list-style-type: none"> ✓ Accessor for number of elements used within dynamic array • Overloaded assignment operator: <ul style="list-style-type: none"> ✓ Tests for assignment to self ✓ Frees memory to dynamic array ✓ Sets size and capacity based on RHS object ✓ Allocates dynamic array based on capacity of array within RHS object ✓ Copies individual elements to newly allocated dynamic array based on size of array within RHS object • Overloaded array subscript operator: <ul style="list-style-type: none"> ✓ Returns <i>Ticket</i> object at indexed element within dynamic array 	
10	10	<p><i>Input</i> class implements:</p> <ul style="list-style-type: none"> • All console input moved from main() to inputTickets() • Checks for duplicates by comparing <i>Ticket</i> object to elements of the <i>Tickets</i> object via its overloaded array subscripting operator • Individual <i>Ticket</i> objects added to <i>Tickets</i> object provided as a parameter 	
15	15	<p><i>Output</i> class implements:</p> <ul style="list-style-type: none"> • All console output moved from main() to OutputTickets() • Outputs elements of the <i>Tickets</i> object via its overloaded array subscripting operator • Calculates totals using elements of the <i>Tickets</i> object via its overloaded array subscripting operator 	
5	5	<p>Source files compile without syntax errors (use -Wall flag) and include sufficient logic to produce expected outcomes</p> <ul style="list-style-type: none"> • The main() simply declares a Tickets object and passes it as an argument to the input and output static functions 	
5	5	<p>Program runs without causing a run-time error using the “happy path”, only valid values (conversion errors are tolerated for this assignment) and exhibits sufficient logic to produce expected outcomes</p>	
100	96.00 +15.00 111.00	Total	<p>Early submission, +15 if at least 70. Early submission, +10 if at least 60.</p>

