

Bicycle Testing



Requirements

1. GUI:

ID	Requirement
GUIR1	Length of the Bicycle: 2 m
GUIR2	Height of the Bicycle: 1 m
GUIR3	Wheel radius front/rear: 28"
GUIR4	Color of bicycle frame: green
GUIR5	Bicycle frame material: aluminium
GUIR6	Tire size front/rear: 80/80 28"

2. Functional:

ID	
FUNCR1	Details for cycling should be available in complete set: 2 wheels with tires, 1 frame, 1 pair of pedals, 1 steering wheel, 1 saddle, disc brake system for both wheels, gear shift system, bicycle chain, front amortization system.
FUNCR2	There have to be available to adjust seat height
FUNCR3	Bicycle has to stand 150 kg of mechanical load
FUNCR4	Brake system has to stop the bicycle with 40 km/h speed within no longer than 5 sec.
FUNCR5	Bicycle has to be able to ride both road and off road
FUNCR6	The quality of covering have to provide future normal exploitation after continuous keeping the bicycle in water for 12 hours
FUNCR7	Pedals must not move if rider don't use them while riding
FUNCR8	Transporting more than one person is not available

Testing Types

1. Smoke Testing
2. GUI Testing
3. Functional Testing
4. Load Testing
5. Confirmation Testing
6. Regression Testing

Smoke Testing

ID	Test case idea	Actual result
TC1	Verify complete set for riding	Pass
TC2	Verify that steering wheel is moving both sides	Pass
TC3	Check if pedals move the chain on to accelerate	Pass
TC4	Verify ability to mount the bicycle and ride	Pass

GUI Testing

ID	Test case idea	Actual result
TC5	Verify dimensions of the bicycle due to specification	Pass
TC6	Verify dimensions of the wheels due to specification	Fail (Front wheel is bigger than rear wheel)
TC7	Verify dimensions of the tires due to specification	Pass
TC8	Verify if color of the frame is green	Pass
TC9	Verify if material of the frame is aluminium	Pass

Functional Testing

ID	Test case idea	Actual result
TC10	Verify ability to spread and assemble the ladder	Pass
TC11	Verify with speedometer and stopwatch that bicycle can full stop with 40 km/h speed within no longer than 5 sec	Pass
TC12	Verify if steering wheel is fixed and it helps bicycle to turn sideways	Pass

Load Testing

TC13	Verify ability to ride on bicycle with weight up to 150 kg	Pass
TC14	Verify quality of coverage of bicycle by putting the bicycle into the water for 12 hours and after that verify the ability to ride with weight up to 150 kg at least 15 minutes	Fail (amortization system broke)
TC15	Verify the ability to ride in different types of environment: road and off road at least for 1 month	Pass

Confirmation Testing

ID	Test case idea	Actual result
TC16	Verify dimensions of the wheels due to specification	Pass
TC17	Verify quality of coverage of bicycle by putting the bicycle into the water for 12 hours and after that verify the ability to ride with weight up to 150 kg at least 15 minutes	Pass

Regression Testing

ID	Test case idea	Actual result
TC18	Verify ability to mount the bicycle and ride	Pass

TC19	Verify dimensions of the wheels due to specification	Pass
TC20	Verify ability to ride on bicycle with weight up to 150 kg	Pass
TC21	Verify quality of coverage of bicycle by putting the bicycle into the water for 12 hours and after that verify the ability to ride with weight up to 150 kg at least 15 minutes	Pass