Student number	point total	req total	extra total	R1 Euler integrator (1p)	R2 Spring system (2p)	R3 Trapezoid integrator (2p)	R4 Pendulum system (2p)	R5 Cloth system (3p)	mod	notes / wtf / ...	RK4 (2p)	Spray system (1-3p)	Wind (2p)	Mouse drag/ poke (2-3p)	Frictionl. coll. (2p)	Particle spline editor (2-3p)	Cloth tearing (1+p)	Particle rendering (1-4p)	Implicit integr (8-10p)	GPU stuff (4+p)	other (points)	other (what)
145525	3	3	0	1	2																	
210984	0	0	0																			
218096	3	3	0	1	0	2	0	0														
292986	0	0	0																			
351526	0	0	0																			
353692	11.5	9.5	2	1	2	2	2	2.5		R5 drag applied wrong.	2											
362418	0	0	0																			
424851	0	0	0																			
425575	0	0	0																			
426419	0	0	0																			
427230	12	10	2	1	2	2	2	3			2											
428925	9	9	0	1	2	2	2	2		R5: Cloth system is missing fixed corner points.												
429461	10	10	0	1	2	2	2	3														
431006	0	0	0																			
432788	12.5	9.5	3	1	1.5	2	2	3		R2, R4 and R5 you forgot to use mass for acceleration calculation. Only -0.5 from R2. The wind has random direction, but the cloth is static under the force. (Not changing as time goes on)	2		1									
437631	0	0	0																			
474898	4	4	0	1	1	2				R2 old state added to force.												
475389	0	0	0																			
476883	12	10	2	1	2	2	2	3			2											
478632	0	0	0																			
506041	0	0	0																			
506287	12	10	2	1	2	2	2	3			2											
520085	7	7	0	1	2	2	2															
525491	5	5	0	1	0.5	2	0.5	1		Program did not compile on the first try. Correct version submitted? R2 broken. R4 and R5 don't work either. They have some correct ideas, so points for the effort.											
525750	0	0	0																			
525941	0	0	0																			
527677	2	2	0	1	1					R2 derivative of position not correct.												
530185	0	0	0																			
530648	0	0	0																			
552794	5.5	5.5	0	1	2	2	0.5	0		R4 crashing, points for attempt.												
552969	0	0	0																			
565710	11.5	9.5	2	1	2	2	2	2.5		R5: Extra spring connections in cloth system.	2											
570116	0	0	0																			
576149	0	0	0																			
577122	12	10	2	1	2	2	2	3			2											
585240	3	3	0	1		2																
586029	0	0	0																			
586333	21	10	11	1	2	2	2	3			2		2						7			
587549	17	10	7	1	2	2	2	3			2	3	2									
589796	0	0	0																			
589929	14.5	10	4.5	1	2	2	2	3		Mouse poking is broken, points for the effort.	2		2	0.5								
590743	1	1	0	1																		
592864	0	0	0																			

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592929	0	0	0																			
595997	11.5	9.5	2	1	2	2	2	2.5			2											
596174	0	0	0																			
596747	3	3	0	1	2	0	0	0														
596815	0	0	0																			
597322	9.5	9.5	0	1	1.5	2	2	3		R2 not dividng force by mass.												
603025	0	0	0																			
604244	0	0	0																			
604312	9	9	0	2	2	0	2	3		R3, you have implemented midpoint integrator.												
605560	9	9	0	1	2	2	2	2														
605722	10	10	0	1	2	2	2	3														
609265	5.5	3.5	2	1	0.5	2	0	0		R2 points for effort.	2											
614580	6.5	6.5	0	1	1.5	2	2			R2 not dividing force by mass.												
618117	10	10	0	1	2	2	2	3														
635187	0	0	0																			
646655	7	7	0	1	2	2	2	0														
646927	3	3	0	1	1	1	0	0		R2, not using mass for acceleration. Also very weird behaviour. R3, only one euler step would have sufficed. Also settings states during the step function -> speeds up the simulation.												
648530	6.5	6.5	0	1	1.5	2	2	0		R2 no mass used in acceleration calculation. Same in R4.												
648653	29	10	19	1	2	2	2	3		Great job!	2	3			2		1		8		3	RKF45: 3
650227	5	5	0	1	2	2																
650492	14	10	4	1	2	2	2	3			2		2									
652131	0	0	0																			
652144	12	10	2	1	2	2	2	3			2											
652801	0	0	0																			
653101	6	6	0	0	2	0.5	1.5	2		R1 and R3, only modifying the first particle of the state. Mathematical dea for R3 correct, so some points for the effort. R4 not using mass in evalF for acceleration. R5 cloth system unstable, something seems off.												
653460	0	0	0																			
653509	10	10	0	1	2	2	2	3														
653758	0	0	0																			
653897	12	10	2	1	2	2	2	3			2											
654579	11.5	9.5	2	1	2	2	1.5	3		R4, your forgot to calculate acceleration from the total force with mass.			2									
655691	0	0	0																			
656470	0	0	0																			
656991	10	10	0	1	2	2	2	3														
665131	12	10	2	1	2	2	2	3			2											
666253	6.5	6.5	0	1	2	1.5	2	0		R3, adding step size to state?												
667171	0	0	0																			
672771	7	7	0	1	2	2	2															
673987	17	10	7	1	2	2	2	3			2	3	2									
675163	14	10	4	1	2	2	2	3			2				2							

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675765	0	0	0																			
677721	0	0	0																			
689395	14	10	4	1	2	2	2	3			2		2									
700436	0	0	0																			
705855	3	3	0	1	2	0	0	0														
706003	0	0	0																			
706045	15	10	5	1	2	2	2	3		Good job! The sprinkler system is somehow really enjoyable :D.	2	3										
706443	7	7	0	1	1.5	2	2	0.5		Please fill readme with student info. R2 and R4, forgetting to use mass. R4 you are also forgetting to add force to the opposite direction in the second spring. R5 is broken, points for the effort.												
706595	7	7	0	1	2	2	2	0														
706919	0	0	0																			
707138	7	7	0	1	1.5	2	2	0.5		R2 not using mass for acceleration calculation. R4 no mass used either. R5 points for effort.												
707277	0	0	0																			
707316	10	10	0	1	2	2	2	3														
707620	5	5	0	1	2	2	0	0														
708616	12	10	2	1	2	2	2	3			2											
708988	10	10	0	1	2	2	2	3														
709026	6	6	0	1	2	2	1	0		R4 forgetting to add spring force to the second spring.												
709178	13.5	10	3.5	1	2	2	2	3		RK4 wrong weights for weighted average.	1.5		2									
709903	5	5	0	1	2	2	0	0														
711111	14	10	4	1	2	2	2	3			2		2									
711218	13.5	10	3.5	1	2	2	2	3		RK4 missing weighted average weights from forces.	1.5		2									
711263	12	10	2	1	2	2	2	3			2											
711810	8.5	7	1.5	1	2	2	2	0		RK4 wrong weights for weighted average.	1.5											
712039	13.5	10	3.5	1	2	2	2	3				1.5	2									
713601	0	0	0																			
713928	0	0	0																			
714477	0	0	0																			
714574	11.5	9.5	2	1	2	2	2	2.5		R3 and R5 the small problem was that you divided velocity by mass not the total force. Fixing this fixed all the issues. Only R5 minus points.	2											
716718	9.5	9.5	0	1	1.5	2	2	3		R2 divide all forces by mass.												
716792	4	4	0	1	1	2				R2 effort points.												
717377	0	0	0																			
729637	12	10	2	1	2	2	2	3			2											

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730105	8.5	8.5	0	1	1	2	1.5	3		R2, spring force is calculated to the opposite direction. The second particle just falls. Also you are not using mass for acceleration on R2, R4 or R5 -> -0.5. R5 slow fps due to nested loops.													
730448	14	10	4	1	2	2	2	3			2		2									
730969	8	8	0	1	2	2	2	1		R5: Cloth system partially done.												
732381	7	7	0	1	2	2	2	0														
763282	9.5	9.5	0	1	1.5	2	2	3		R2 and R4 not using mass for acceleration, only -0.5 for R2.												
765662	13.5	9.5	4	1	2	2	2	2.5		R5, cloth system unstable with larger step sizes that the example can handle.	2		2									
766108	7	7	0	1	2	2	2															
768902	0	0	0																			
770084	10	10	0	1	2	2	2	3														
772040	11	11	0	2	2	2	2	3														
778109	20	10	10	1	2	2	2	3			2	3	2		2		1					
779661	3	3	0	1		2																
779959	18.5	10	8.5	1	2	2	2	3		Cool ideas with the soft-body simulations!	2										6.5	Free flying camera 1.5p; Soft-body simulation 5p
780210	10	10	0	1	2	2	2	3														
780223	14	10	4	1	2	2	2	3			2		2									
781468	0	0	0																			
781866	12	10	2	1	2	2	2	3			2											
782124	0	0	0																			
782182	18.5	9.5	9	1	1.5	2	2	3		R2 forgot divide force by mass.	2	3	2		2							
782357	12	10	2	1	2	2	2	3			2											
782700	5	5	0	1	2	2	0	0														
783288	10.5	9.5	1	1	1.5	2	2	3		R2 not dividing force by mass. RK4 missing half of implementation.	1											
783301	0	0	0	0																		
783356	7	7	0	1	2	2	2	0														
785707	12	10	2	1	2	2	2	3			2											
786146	6	6	0	1	2	2	1	0														
786874	0	0	0																			
787226	0	0	0																			
788254	38	10	28	1	2	2	2	3		GPU rigid body simulation very cool! Great work.	2								8	4	14	GPU cloth system texture + shading 2; GPU rigid body simulation 12;
788539	10	10	0	1	2	2	2	3														
788788	0	0	0																			
789017	0	0	0																			
791610	6.5	4.5	2	1	1.5	2	0	0		R2 no mass used in acceleration calculation. R3 no need to set_state in the middle - no minus points even though it speeds up the simulation.	2											
791678	0	0	0																			
793621	5	5	0	1	2	2																
795658	1	1	0	1	0	0	0	0														

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795755	7	7	0	1	2	2	1	1		R4 derivative position calculated wrong, should be velocity. R5 1p for structural springs.												
818409	11.5	9.5	2	1	2	2	2	2.5		R5: Cloth system unstable at equilibrium.	2											
819754	0	0	0																			
829948	1	1	0	1	0	0	0	0														
831907	14.5	10	4.5	1	2	2	2	3		Your wind mode change check seems to be ok. Sprinkler points for trying.	2	0.5	2									
838191	5.5	5.5	0	1	1.5	2	1			R4 spring forces wrong. R2 not dividing force by mass.												
853723	0	0	0																			
871831	9	7	2	1	2	2	1.5	0.5		R4 starting position wrong but otherwise good. R5 points for effort.	2											
882972	0	0	0																			
883353	8	8	0	1	2	2	2	1		R5: Cloth system partially done.												
885665	9.5	8	1.5	1	2	2		3		RK4 unstable due to forgetting to add all contributions to the sum.You used = instead of +=.	1.5											
887799	12	10	2	1	2	2	2	3		Great job!	2											
892179	12	10	2	1	2	2	2	3		Good job!	2											
892292	0	0	0																			
892412	11	10	1	1	2	2	2	3			1											
892690	9.5	9.5	0	1	2	2	2	2.5		R5: Cloth system unstable.												
897572	12	10	2	1	2	2	2	3			2											
897925	11.5	9.5	2	1	2	2	2	2.5		R5: Cloth system unstable.	2											
903929	0	0	0																			
905833	12	10	2	1	2	2	2	3		R5 seems to have extra springs but it works.	2											
906971	12	10	2	1	2	2	2	3			2											
913498	6.5	6.5	0	1	2	2	1.5	0		R4: Pendulum system unstable at equilibrium. R5: Cloth system not drawing particles within camera view.												
913511	0	0	0																			
913540	0	0	0																			
943413	0	0	0																			
952352	0	0	0																			
963354	12	10	2	1	2	2	2	3			2											
976260	13.5	9.5	4	1	1.5	2	2	3		R2 you forgot to divide force by mass. Don't know if this is conscious decision as mass is 1. RK4, you forgot weighted average weights in the last step. Cloth tearing 0.5 for the idea.	1.5		2								0.5	tearing 0.5

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976503	39.5	9.5	30	1	1.5	2	2	3		R2 no horizontal movement. Great job!	2										28	Double pendulum: 2, Simple constrained system: 3. constrained system: 5, rigidbody: 4, softbody: 4, fabrik: 5, Iterative constrained system: 5
995212	20	20	0	1	12	2	2	3														
995270	10	10	0	1	2	2	2	3														
995319	14	10	4	1	2	2	2	3			2		2									
995762	9.5	9.5	0	1	2	2	1.5	3		R4 spring forces seem to be wrong.												
998743	11.5	9.5	2	1	1.5	2	2	3		R2 force not divided by mass.	2											
999263	0	0	0																			
1000203	0	0	0																			
1001163	9	9	0	1	2	2	2	2		R5: Cloth system partially done.												
1002450	12	10	2	1	2	2	2	3			2											
1002696	21	10	11	1	2	2	2	3			2	3	2							4		
1010138	16	10	6	1	2	2	2	3			2	2	2									
1010921	10.5	8.5	2	1	2	2	2	1.5		R5 unstable cloth system. Creating springs but not using them?	2											
1011166	7	7	0	1	2	2	2															
1015515	13	10	3	1	2	2	2	3		Your program did not compile without modifying FluidsystemevalF. Wind makes the cloth stationary?	2	0	1									
1031418	11.5	9.5	2	1	1.5	2	2	3		R2, R3 and R5 forgetting to use mass for acceleration.	2											
1034897	10	10	0	1	2	2	2	3														
1034907	18.5	10	8.5	1	2	2	2	3		Frictionless collision makes the cloth unstable. Cloth tearing just tears the cloth off.	2	3	2		1		0.5					
100063675	3	3	0	1		2				Please fill out your name in the README.												
100065699	0	0	0							Empty zip fle!												
100077632	1	1	0	1																		
100080195	10	10	0	1	2	2	2	3														
100082119	3	3	0	1		2																
100083817	9	9	0	1	2	2	2	2		Please fill the README!! R5 starting position not showing movement.												
100084638	8.5	8.5	0	1	1.5	2	2	2		R2 not showing horizontal movement. R5 starting position not correct												
100085828	10	10	0	1	2	2	2	3														
100087363	5.5	5	0.5	1	2	2				Effort points for rk4.	0.5											
100088595	0	0	0	0	0	0	0	0		Empty submission?												
100088812	9.5	9.5	0	1	1.5	2	2	3		R2 all forces not divided by mass.												

Student number	point total	req total	extra total	R1 Euler integrator (1p)	R2 Spring system (2p)	R3 Trapezoid integrator (2p)	R4 Pendulum system (2p)	R5 Cloth system (3p)	mod	notes / wtf / ...	RK4 (2p)	Spray system (1-3p)	Wind (2p)	Mouse drag/ poke (2-3p)	Frictionl. coll. (2p)	Particle spline editor (2-3p)	Cloth tearing (1+p)	Particle rendering (1-4p)	Implicit integr (8-10p)	GPU stuff (4+p)	other (points)	other (what)
100090114	8.5	8.5	0	1	1.5	1	2	3		R3 idea correct but crashing.R2 force not divided by mass.												
100097625	4.5	4.5	0	1	1.5	2				Please return the whole folder with filled README included. R2 not dividing force by mass.												
100098349	0	0	0																			
100119587	0	0	0																			
100126376	12	10	2	1	2	2	2	3					2									
100135985	12.5	8.5	4	1	1.5	2	1.5	2.5		R2, R4 and R5 are unstable due to using current_state_ rather than state argument in calculations.	2		2									
100153873	0	0	0																			
27028M	12.5	8.5	4	1	2	2	2	1.5		R5 looks bit weird. Forgetting to use mass for spring forces. ComputeCloth, points for the effort!	2									2		
35564T	7	7	0	1	2	2	2	0														
46477D	5.5	5.5	0	2	1	2	0.5	0		R3 using position in the drag calculation. Same in R4. Also R4 explodes and no spring forces. Points for effort.												
68933B	0	0	0																			
81616N	0	0	0																			
82085F	6.5	6.5	0	1	1.5	2	2	0		R2, for acceleration calculation from net force, divide all forces by the mass - not only gravity. Same for R4.												
83818L	14	10	4	1	2	2	2	3			2		2									
k28342	0	0	0																			
k90993	15	10	5	1	2	2	2	3		Good job!	2		2				1					