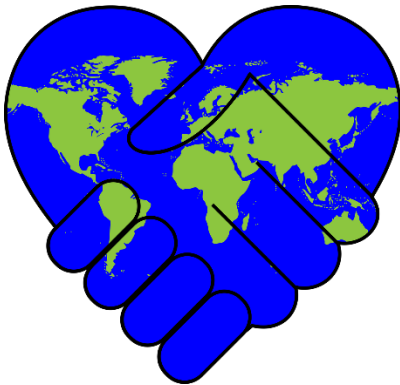




Laurea Triennale in informatica - Università di Salerno

Corso di *Ingegneria del Software* – Prof.ssa F. Ferrucci, Prof. Carmine Gravino



EasyAgreement

TSR TEST SUMMARY REPORT

Versione	1.0
Data	12/01/2020
Destinatario	Prof. Carmine Gravino, Prof.ssa Filomena Ferrucci
Presentato da	Tutti i team members
Approvato da	Francesco Califano, Domenico Marino



Laurea Triennale in informatica - Università di Salerno

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Revision History

Data	Versione	Descrizione	Autori
12/01/2020	1.0	Prima stesura	Tutti i team members



Laurea Triennale in informatica - Università di Salerno

Corso di *Ingegneria del Software* – Prof.ssa F. Ferrucci, Prof. Carmine Gravino

Team composition

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1. Introduzione

Questo documento mostra i risultati dell'esecuzione dei test case di unità delle varie componenti del software web Easy Agreement. In particolare, sono stati testati i controller e i model del software con l'utilizzo di Mocha&Chai, e successivamente è stato effettuato il testing di sistema con Selenium.

1.1 Identificativo del documento

Il documento in questione è caratterizzato da alcune proprietà che lo definiscono univocamente; tali proprietà riguardano la data di stesura, i nomi degli autori del documento e l'approvazione da parte dei project manager.

1.2 Scopo

Il Test Summary Report fornisce una presentazione dei casi di test di unità, di integrazione e di sistema per il software Easy Agreement. I membri del team si sono impegnati nel verificare che le singole unità del sistema (classi e metodi) abbiano avuto il comportamento atteso.

1.3 Riferimenti

- EA_RAD_V_2.1.docx
- EA_SDD_V_1.1.docx
- EA_ODD_V_1.1.docx
- EA_TCS_V_1.1.docx
- B. Bruegge, A.H.Dutoit, *ObjectOrientedSoftwareEngineering—UsingUML, Patterns and Java*, Prentice Hall.
- Slides del corso presenti sulla piattaforma.



2. Risultati test di unità

Di seguito vengono riportati i risultati dei test di unità in base alle varie gestioni del sistema.

2.1 Features testate

Il testing d'unità si propone di effettuare il test dei control presenti all'interno della propria gestione. In particolare:

1. GT – GESTIONE TUTOR:
 - viewListControl
 - tutorControl
2. GLA – GESTIONE LEARNING AGREEMENT
 - learningAgreementControl
3. GAR – GESTIONE AUTENTICAZIONE E REGISTRAZIONE
 - loginControl
 - registerControl
4. GN – GESTIONE NOTIFICHE
 - notificationControl
5. GP – GESTIONE PROFILO
 - studentControl
 - academicTutorControl
 - externalTutorControl
 - administratorControl
6. GR – GESTIONE RICHIESTE
 - requestControl
7. GD – GESTIONE DOCUMENTI
 - documentControl
8. GC – GESTIONE CHAT
 - messageControl



2.2 Panoramica dei risultati dei test

2.2.1 Gestione Tutor

Classe TutorControl

```
646   Field test for tutorControl
647   ✓ Testin method tutorControl - TC_TM_1.1
648   Field test for tutorControl
649   ✓ Testin method tutorControl - TC_TM_1.2
650   Field test for tutorControl
651   ✓ Testin method tutorControl - TC_TM_1.3
652   Field test for tutorControl
653   ✓ Testin method tutorControl - TC_TM_1.4
654   Field test for tutorControl
655   ✓ Testin method tutorControl - TC_TM_1.5
656   Field test for tutorControl
657   ✓ Testin method tutorControl - TC_TM_1.6
658   Field test for tutorControl
659   ✓ Testin method tutorControl - TC_TM_1.7
660   Field test for tutorControl
661   ✓ Testin method tutorControl - TC_TM_1.8
662   Field test for tutorControl
663   ✓ Testin method tutorControl - TC_TM_1.9
664   Field test for tutorControl
665   ✓ Testin method tutorControl - TC_TM_1.10
666   Field test for tutorControl
667   ✓ Testin method tutorControl - already reg (64ms)
668   Field test for tutorControl
669   ✓ Testin method tutorControl - reg (62ms)
670   Field test for tutorControl
671   ✓ Testin method tutorControl - TC_TM_2.1
672   Field test for tutorControl
673   ✓ Testin method tutorControl - TC_TM_2.2
674   Field test for tutorControl
675   ✓ Testin method tutorControl - TC_TM_2.3
676   Field test for tutorControl
677   ✓ Testin method tutorControl - TC_TM_2.4
678   Field test for tutorControl
679   ✓ Testin method tutorControl - TC_TM_2.5
680   Field test for tutorControl
```




```
680      Field test for tutorControl
681      ✓ Testin method tutorControl - TC_TM_2.6
682      Field test for tutorControl
683      ✓ Testin method tutorControl - TC_TM_2.7
684      Field test for tutorControl
685      ✓ Testin method tutorControl - TC_TM_2.7
686      Field test for tutorControl
687      ✓ Testin method tutorControl - TC_TM_2.8
688      Field test for tutorControl
689      ✓ Testin method tutorControl - TC_TM_2.9
690      Field test for tutorControl
691      ✓ Testin method tutorControl - TC_TM_2.10
692      Field test for tutorControl
693      ✓ Testin method tutorControl - TC_TM_2.11
694      Field test for tutorControl
695      ✓ Testin method tutorControl - TC_TM_2.12
696      Field test for tutorControl
697      ✓ Testin method tutorControl - TC_TM_2.14
698      Field test for tutorControl
699      ✓ Testin method tutorControl - TC_TM_2.15
700      Field test for tutorControl
701      ✓ Testin method tutorControl - TC_TM_2.16
702      Field test for tutorControl
703      ✓ Testin method tutorControl - already reg
704      Field test for tutorControl
705      ✓ Testin method tutorControl - deleteHostOrg
706      Field test for tutorControl
707      ✓ Testin method tutorControl - deleteHostOrg
708      Field test for tutorControl
709      ✓ Testin method tutorControl - deleteExt
710      Field test for tutorControl
711      ✓ Testin method tutorControl - deleteExt
712
```



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Classe ViewListControl

```
572
573   Field test for viewListControl
574       ✓ Testing retrieveAll academicTutor
575       ✓ Testing retrieveAll externalTutor
576       ✓ Testing retrieveAll hostOrganization
577       ✓ Testing retrieveAll nothing
578       ✓ Testing getHost for info
579       ✓ Testing getAcademic for info
580       ✓ Testing getExternal for info
581
```



2.2.2 Gestione Learning Agreement

Classe learningAgreementControl

```
467   Field test for learningAgreementControl
468   ✓ Testing method sendLaStudent - TC_LAM_1.1
469   ✓ Testing method sendLaStudent - TC_LAM_1.2
470   ✓ Testing method sendLaStudent - TC_LAM_1.3
471   ✓ Testing method sendLaStudent - TC_LAM_1.4
472   ✓ Testing method sendLaStudent - TC_LAM_1.5
473   ✓ Testing method sendLaStudent - TC_LAM_1.6
474   ✓ Testing method sendLaStudent - TC_LAM_1.7
475   ✓ Testing method sendLaStudent - TC_LAM_1.8
476   ✓ Testing method sendLaStudent - TC_LAM_1.9
477   ✓ Testing method sendLaStudent - TC_LAM_1.10
478   ✓ Testing method sendLaStudent - TC_LAM_1.11
479   ✓ Testing method sendLaStudent - TC_LAM_1.12
480   ✓ Testing method sendLaStudent - TC_LAM_1.13
481   ✓ Testing method sendLaStudent - TC_LAM_1.14
482   ✓ Testing method sendLaStudent - TC_LAM_1.15
483   ✓ Testing method sendLaStudent - TC_LAM_1.16
484   ✓ Testing method sendLaStudent - TC_LAM_1.17
485   ✓ Testing method sendLaStudent - TC_LAM_1.18
486   ✓ Testing method sendLaStudent - TC_LAM_1.19
487   ✓ Testing method sendLaStudent - TC_LAM_1.20
488   ✓ Testing method sendLaStudent - TC_LAM_1.21
489   ✓ Testing method sendLaStudent - TC_LAM_1.22
490   ✓ Testing method sendLaStudent - TC_LAM_1.23
491   ✓ Testing method sendLaStudent - TC_LAM_1.24
492   ✓ Testing method sendLaStudent - TC_LAM_1.25
493   ✓ Testing method sendLaStudent - TC_LAM_1.26
494   ✓ Testing method sendLaStudent - TC_LAM_1.27
495   ✓ Testing method sendLaStudent - TC_LAM_1.28
496   ✓ Testing method sendLaStudent - TC_LAM_1.29
497   ✓ Testing method sendLaStudent - TC_LAM_1.30
498   ✓ Testing method sendLaStudent - TC_LAM_1.31
499   ✓ Testing method sendLaStudent - TC_LAM_1.32
500   ✓ Testing method sendLaStudent - TC_LAM_1.33
501   ✓ Testing method sendLaStudent - TC_LAM_1.34
```



```
502      ✓ Testing method sendLaStudent - TC_LAM_1.35
503      ✓ Testing method sendLaStudent - TC_LAM_1.36
504      ✓ Testing method sendLaStudent - TC_LAM_1.37
505      ✓ Testing method sendLaStudent - TC_LAM_1.38
506      ✓ Testing method sendLaStudent - TC_LAM_1.39
507      ✓ Testing method sendLaStudent - TC_LAM_1.40
508      ✓ Testing method sendLaStudent - TC_LAM_1.41
509      ✓ Testing method sendLaStudent - TC_LAM_1.42
510      ✓ Testing method sendLaStudent - TC_LAM_1.43
511      ✓ Testing method sendLaStudent - TC_LAM_1.44
512      ✓ Testing method sendLaStudent - TC_LAM_1.45
513      ✓ Testing method sendLaStudent - TC_LAM_1.46
514      ✓ Testing method sendLaStudent - TC_LAM_1.47
515      ✓ Testing method sendLaStudent - TC_LAM_1.48
516      ✓ Testing method sendLaStudent - TC_LAM_1.49
517      ✓ Testing method sendLaStudent - TC_LAM_1.50
518      ✓ Testing method sendLaStudent - TC_LAM_1.51
519      ✓ Testing method sendLaStudent - TC_LAM_1.52
520      ✓ Testing method sendLaStudent - TC_LAM_1.53
521      ✓ Testing method sendLaStudent - TC_LAM_1.54
522      ✓ Testing method sendLaStudent - TC_LAM_1.55
523      ✓ Testing method sendLaStudent - TC_LAM_1.56
524      ✓ Testing method sendLaStudent - TC_LAM_1.57
525      ✓ Testing method sendLaStudent - TC_LAM_1.58
526      ✓ Testing method sendLaStudent - TC_LAM_1.59
527      ✓ Testing method sendLaStudent - TC_LAM_1.60
528      ✓ Testing method sendLaStudent - TC_LAM_1.61
529      ✓ Testing method saveLaStudent - TC_LAM_1.63
530      ✓ Testing method sendLaStudent - TC_LAM_1.62 (184ms)
531      ✓ Testing method sendLaAcademicTutor - TC_LAM_2.1
532      ✓ Testing method sendLaAcademicTutor - TC_LAM_2.2
533      ✓ Testing method sendLaAcademicTutor - TC_LAM_2.3
534      ✓ Testing method sendLaAcademicTutor - TC_LAM_2.4
535      ✓ Testing method sendLaAcademicTutor - TC_LAM_2.5
536      ✓ Testing method sendLaAcademicTutor - TC_LAM_2.6
```



```
537 ✓ Testing method sendLaAcademicTutor - TC_LAM_2.7
538 ✓ Testing method sendLaAcademicTutor - TC_LAM_2.8 (203ms)
539 ✓ Testing method sendLaAcademicTutor - TC_LAM_2.9
540 ✓ Testing method sendLaAcademicTutor - TC_LAM_2.10
541 ✓ Testing method sendLaAcademicTutor - TC_LAM_2.11
542 ✓ Testing method sendLaAcademicTutor - TC_LAM_2.12
543 ✓ Testing method sendLaAcademicTutor - TC_LAM_2.13
544 ✓ Testing method sendLaAcademicTutor - TC_LAM_2.14
545 ✓ Testing method sendLaAcademicTutor - TC_LAM_2.15
546 ✓ Testing method sendLaAcademicTutor - TC_LAM_2.16
547 ✓ Testing method sendLaAcademicTutor - TC_LAM_2.17
548 ✓ Testing method sendLaAcademicTutor - TC_LAM_2.18
549 ✓ Testing method sendLaAcademicTutor - TC_LAM_2.19
550 ✓ Testing method sendLaAcademicTutor - TC_LAM_2.20
551 ✓ Testing method sendLaAcademicTutor - TC_LAM_2.21
552 ✓ Testing method saveLaAcademicTutor
553 ✓ Testing method sendLaAcademicTutor - TC_LAM_2.22 (195ms)
554 ✓ Testing method sendLaExternalTutor - TC_LAM_3.1
555 ✓ Testing method sendLaExternalTutor - TC_LAM_3.2
556 ✓ Testing method sendLaExternalTutor - TC_LAM_3.3
557 ✓ Testing method sendLaExternalTutor - TC_LAM_3.4
558 ✓ Testing method sendLaExternalTutor - TC_LAM_3.5
559 ✓ Testing method sendLaExternalTutor - TC_LAM_3.6
560 ✓ Testing method sendLaExternalTutor - TC_LAM_3.7
561 ✓ Testing method sendLaExternalTutor - TC_LAM_3.8
562 ✓ Testing method sendLaExternalTutor - TC_LAM_3.9
563 ✓ Testing method saveLaExternalTutor
564 ✓ Testing method sendLaExternalTutor - TC_LAM_3.10 (237ms)
565 ✓ Testing method getVersion - TC_LAM_4.1
566 ✓ Testing method getVersion - TC_LAM_4.2
567 ✓ Testing method getAllVersions
568 ✓ Testing method getData
569 ✓ Testing method disapproveAcademicTutor
570 ✓ Testing method sendLaStudent - delete Request (202ms)
571 ✓ Testing method disapproveExternalTutor
```



2.2.3 Gestione Autenticazione e Registrazione

Classe loginControl

```
581
582  Login  unit  testing...
583    ✓ testing method loginControl - TC_ARM_1.1.1 & TC_ARM_1.2.1 & TC_ARM_1.3.1 & TC_ARM_1.4.1
584    ✓ testing method loginControl - TC_ARM_1.1.2 & TC_ARM_1.2.2 & TC_ARM_1.3.2 & TC_ARM_1.4.2
585    ✓ testing method loginControl - TC_ARM_1.1.3
586    ✓ testing method loginControl - TC_ARM_1.2.3
587    ✓ testing method loginControl - TC_ARM_1.3.3
588    ✓ testing method loginControl - TC_ARM_1.4.3
589    ✓ testing method loginControl - TC_ARM_1.1.4 & TC_ARM_1.2.4 & TC_ARM_1.3.4 & TC_ARM_1.4.4
590    ✓ testing method loginControl - TC_ARM_1.1.5 & TC_ARM_1.2.5 & TC_ARM_1.3.5 & TC_ARM_1.4.5
591    ✓ testing method loginControl - TC_ARM_1.1.6 (61ms)
592    ✓ testing method loginControl - TC_ARM_1.2.6 (63ms)
593    ✓ testing method loginControl - TC_ARM_1.3.6 (69ms)
594    ✓ testing method loginControl - TC_ARM_1.4.6 (67ms)
595    ✓ testing method loginControl - student email not exist
596    ✓ testing method loginControl - academic email not exist
597    ✓ testing method loginControl - external email not exist
598    ✓ testing method loginControl - admin email not exist
599    ✓ testing method loginControl - TC_ARM_1.1.7 (61ms)
600    ✓ testing method loginControl - TC_ARM_1.2.7 (63ms)
601    ✓ testing method loginControl - TC_ARM_1.3.7 (66ms)
602    ✓ testing method loginControl - TC_ARM_1.4.7 (73ms)
603
```



Classe registerControl

```
612
613   Field test for registerControl
614     ✓ Testin method registerControl - TC_ARM_2.1.1
615     ✓ Testin method registerControl - TC_ARM_2.1.2
616     ✓ Testin method registerControl - TC_ARM_2.1.3
617     ✓ Testin method registerControl - TC_ARM_2.1.4
618     ✓ Testin method registerControl - TC_ARM_2.1.5
619     ✓ Testin method registerControl - TC_ARM_2.1.6
620     ✓ Testin method registerControl - TC_ARM_2.1.7 (69ms)
621     ✓ Testin method registerControl - TC_ARM_2.1.8
622     ✓ Testin method registerControl - TC_ARM_2.1.9
623     ✓ Testin method registerControl - TC_ARM_2.1.10 (74ms)
624     ✓ Testin method registerControl - TC_ARM_2.1.11
625     ✓ Testin method registerControl - TC_ARM_2.1.12
626     ✓ Testin method registerControl - TC_ARM_2.1.13
627     ✓ Testin method registerControl - TC_ARM_2.1.14
628     ✓ Testin method registerControl - TC_ARM_2.1.15
629     ✓ Testin method registerControl - TC_ARM_2.1.16
630     ✓ Testin method registerControl - TC_ARM_2.1.17
631     ✓ Testin method registerControl - TC_ARM_2.1.18
632     ✓ Testin method registerControl - TC_ARM_2.1.19 (68ms)
633     ✓ Testin method RegisterControl - TC_ARM_2.2.1
634     ✓ Testin method RegisterControl - TC_ARM_2.2.2
635     ✓ Testin method RegisterControl - TC_ARM_2.2.3
636     ✓ Testin method RegisterControl - TC_ARM_2.2.4
637     ✓ Testin method RegisterControl - TC_ARM_2.2.5
638     ✓ Testin method RegisterControl - TC_ARM_2.2.6
639     ✓ Testin method RegisterControl - TC_ARM_2.2.7 (79ms)
640     ✓ Testin method RegisterControl - TC_ARM_2.2.8
641     ✓ Testin method RegisterControl - TC_ARM_2.2.9
642     ✓ Testin method RegisterControl - TC_ARM_2.2.10
643     ✓ Testin method RegisterControl - TC_ARM_2.2.11
644     ✓ Testin method RegisterControl - TC_ARM_2.2.12 (64ms)
645
```



2.2.4 Gestione Notifiche

Classe notificationControl

```
603
604   Field test for notificationControl
605       ✓ Testing insertNotification
606       ✓ Testing getAllNotifications
607       ✓ Testing getAllNotifications of null
608       ✓ Testing removeNotification
609       ✓ Testing setReceivedNotification true
610       ✓ Testing getReceivedNotification
611       ✓ Testing setReceivedNotification false
612
```




2.2.5 Gestione Profilo

Classi studentControl, academicControl, externalControl, administratorControl

```
718   Field test for profileControl
719       ✓ testing method academicTutorControl - TC_PM_1.2.1
720       ✓ testing method academicTutorControl - TC_PM_1.2.2
721       ✓ testing method academicTutorControl - TC_PM_1.2.3
722       ✓ testing method academicTutorControl - TC_PM_1.2.4
723       ✓ testing method academicTutorControl - TC_PM_1.2.5
724       ✓ testing method academicTutorControl - TC_PM_1.2.6
725       ✓ testing method academicTutorControl - TC_PM_1.2.10
726       ✓ testing method academicTutorControl - TC_PM_1.2.11
727       ✓ testing method academicTutorControl - TC_PM_1.2.12
728       ✓ testing method academicTutorControl not exist
729       ✓ testing method academicTutorControl - TC_PM_1.2.13
730       ✓ testing method academicTutorControl - TC_PM_1.2.14
731       ✓ testing method academicTutorControl - TC_PM_1.2.15
732       ✓ testing method academicTutorControl - TC_PM_1.2.16
733       ✓ testing method academicTutorControl - TC_PM_1.2.17
734       ✓ testing method academicTutorControl - change passw (72ms)
735
```

```
736   Field test for administratorControl
737       ✓ testing method administratorControl - TC_PM_1.3.13
738       ✓ testing method administratorControl - TC_PM_1.3.14
739       ✓ testing method administratorControl - TC_PM_1.3.15
740       ✓ testing method administratorControl - TC_PM_1.3.16
741       ✓ testing method administratorControl - TC_PM_1.3.17
742       ✓ testing method administratorControl - change passw (123ms)
743       ✓ testing method administratorControl - not found (123ms)
744
```



```
744
745   Field test for profileControl
746   ✓ testing method externalTutorControl - TC_PM_1.3.1
747   ✓ testing method externalTutorControl - TC_PM_1.3.2
748   ✓ testing method externalTutorControl - TC_PM_1.3.3
749   ✓ testing method externalTutorControl - TC_PM_1.3.4
750   ✓ testing method externalTutorControl - TC_PM_1.3.5
751   ✓ testing method externalTutorControl - TC_PM_1.3.6
752   ✓ testing method externalTutorControl - TC_PM_1.3.10
753   ✓ testing method externalTutorControl - TC_PM_1.3.11
754   ✓ testing method externalTutorControl - TC_PM_1.3.12
755   ✓ testing method externalTutorControl not exist
756   ✓ testing method externalTutorControl - TC_PM_1.3.13
757   ✓ testing method externalTutorControl - TC_PM_1.3.14
758   ✓ testing method externalTutorControl - TC_PM_1.3.15
759   ✓ testing method externalTutorControl - TC_PM_1.3.16
760   ✓ testing method externalTutorControl - TC_PM_1.3.17
761   ✓ testing method externalTutorControl - change passw (61ms)
762
```



```
762
763   Field test for profileControl
764   ✓ testing method studentControl - TC_PM_1.1.1
765   ✓ testing method studentControl - TC_PM_1.1.2
766   ✓ testing method studentControl - TC_PM_1.1.3
767   ✓ testing method studentControl - TC_PM_1.1.4
768   ✓ testing method studentControl - TC_PM_1.1.5
769   ✓ testing method studentControl - TC_PM_1.1.6
770   ✓ testing method studentControl - TC_PM_1.1.10
771   ✓ testing method studentControl - TC_PM_1.1.11
772   ✓ testing method studentControl - TC_PM_1.1.12
773   ✓ testing method studentControl - TC_PM_1.1.13
774   ✓ testing method studentControl - TC_PM_1.1.14
775   ✓ testing method studentControl - TC_PM_1.1.15
776   ✓ testing method studentControl - TC_PM_1.1.16
777   ✓ testing method studentControl - TC_PM_1.1.17
778   ✓ testing method studentControl - TC_PM_1.1.18
779   ✓ testing method studentControl not exist
780   ✓ testing method studentControl - TC_PM_1.1.19
781   ✓ testing method studentControl - TC_PM_1.1.20
782   ✓ testing method studentControl - TC_PM_1.1.21
783   ✓ testing method studentControl - TC_PM_1.1.22
784   ✓ testing method studentControl - TC_PM_1.1.23
785   ✓ testing method studentControl - password do not match
786   ✓ testing method studentControl - change passw (129ms)
787
788
```



2.2.6 Gestione Richieste

Classe requestControl

```
712
713   Field test for requestControl
714       ✓ Test method getAllRequests
715       ✓ Test method getRequest
716       ✓ Test method getRequestDetails
717
```

2.2.7 Gestione Documenti

Classe documentControl

```
287
288   Field test for documentControl
289       ✓ Testing insertIDCard (79ms)
290       ✓ Testing insertIDCard already exist
291       ✓ Testing insertCV
292       ✓ Testing insertCV already exist
293       ✓ Testing viewIDCard
294       ✓ Testing viewIDCard not exist
295       ✓ Testing viewCV
296       ✓ Testing viewCV not exist
297       ✓ Testing getIDCardStatus
298       ✓ Testing getIDCardStatus not exist
299       ✓ Testing getCVStatus
300       ✓ Testing getCVStatus not exist
301       ✓ Testing deleteIDCard
302       ✓ Testing deleteCV
303
```



2.2.8 Gestione Chat

Classe *messageControl*

```
266      Field test for messageControl
267      ✓ Testing saveMessage
268      ✓ Testing getMessages
269      ✓ Testing getContacts 1
270      ✓ Testing getContacts 2
271      ✓ Testing getContacts 3
272      ✓ Testing getContacts nothing
273      ✓ Testing searchUser 1.1
274      ✓ Testing searchUser 1.2
275      ✓ Testing searchUser 1.3
276      ✓ Testing searchUser 2.1
277      ✓ Testing searchUser 2.2
278      ✓ Testing searchUser 2.3
279      ✓ Testing updateMessage
280      ✓ Testing updateMessage not exist
281      ✓ Testing removeMessage
282      ✓ Testing removeMessage not exist
283      ✓ Testing setReceivedMessage true
284      ✓ Testing setReceivedMessage true
285      ✓ Testing getReceivedMessage
286      ✓ Testing setReceivedMessage false
287
```



3. Risultati test di integrazione

3.1 Panoramica dei risultati dei test

Lo scopo del test di integrazione, data l'architettura software impiegata, è di verificare il corretto funzionamento degli endpoint dell'applicazione, controllando il risultato atteso dalla response. Esso rappresenta una delle fasi di testing più importanti, in quanto consiste nella verifica delle interazioni tra 2 o più componenti. Per eseguirlo è stato utilizzato Mocha. Elenchiamo qui i risultati:



```
304   Integration Testing
305   ✓ Test for /login (84ms)
306   (node:6281) [DEP0066] DeprecationWarning: OutgoingMessage.prototype._h
307   ✓ Test for /index.html (80ms)
308   ✓ Test for /index.html no login
309   ✓ Test for /compileLASTudent.html (77ms)
310   ✓ Test for /compileLASTudent.html no login
311   ✓ Test for /compileLASTudent.html wrong user (69ms)
312   ✓ Test for /saveStudent (81ms)
313   ✓ Test for /saveStudent no login
314   ✓ Test for /saveStudent wrong user (76ms)
315   ✓ Test for /compileStudent (1796ms)
316   ✓ Test for /compileStudent no login
317   ✓ Test for /compileStudent wrong user (76ms)
318   ✓ Test for /fillForm (71ms)
319   ✓ Test for /fillForm no login
320   ✓ Test for /fillForm wrong user (70ms)
321   ✓ Test for /saveAcademicTutor (112ms)
322   ✓ Test for /saveAcademicTutor no login
323   ✓ Test for /saveAcademicTutor wrong user (65ms)
324   ✓ Test for /fillFormRequest (80ms)
325   ✓ Test for /fillFormRequest no login
326   ✓ Test for /fillFormRequest wrong user (65ms)
327   ✓ Test for /disapproveAcademicTutor (96ms)
328   ✓ Test for /disapproveAcademicTutor no login
329   ✓ Test for /disapproveAcademicTutor wrong user (64ms)
330   ✓ Test for /compileAcademicTutor (302ms)
331   ✓ Test for /compileAcademicTutor no login
332   ✓ Test for /compileAcademicTutor wrong user (66ms)
333   ✓ Test for /saveExternalTutor (107ms)
334   ✓ Test for /saveExternalTutor no login
335   ✓ Test for /saveExternalTutor wrong user (67ms)
336   ✓ Test for /disapproveExternalTutor (94ms)
337   ✓ Test for /disapproveExternalTutor no login
338   ✓ Test for /disapproveExternalTutor wrong user (65ms)
339   ✓ Test for /compileExternalTutor (324ms)
```



```
340      ✓ Test for /compileExternalTutor no login
341      ✓ Test for /compileExternalTutor wrong user (70ms)
342      ✓ Test for /getRequests (76ms)
343      ✓ Test for /getRequests no login
344      ✓ Test for /getRequests wrong user (79ms)
345      ✓ Test for /getRequest (75ms)
346      ✓ Test for /getRequest no login
347      ✓ Test for /getRequest wrong user (70ms)
348      ✓ Test for /getDetails (81ms)
349      ✓ Test for /getDetails no login
350      ✓ Test for /getDetails wrong user (66ms)
351      ✓ Test for /getAllRequestVersions (89ms)
352      ✓ Test for /getAllRequestVersions no login
353      ✓ Test for /getAllRequestVersions wrong user (65ms)
354      ✓ Test for /getRequestVersions (86ms)
355      ✓ Test for /getRequestVersions no login
356      ✓ Test for /getRequestVersions wrong user (64ms)
357      ✓ Test for /getVersions (75ms)
358      ✓ Test for /getVersions no login
359      ✓ Test for /getVersions wrong user (66ms)
360      ✓ Test for /getAllVersions (84ms)
361      ✓ Test for /getAllVersions no login
362      ✓ Test for /getAllVersions wrong user (70ms)
363      ✓ Test for /getStatus (70ms)
364      ✓ Test for /getStatus no login
365      ✓ Test for /getStatus wrong user (73ms)
366      ✓ Test for /uploadID (73ms)
367      ✓ Test for /uploadID no login
368      ✓ Test for /uploadID wrong user (68ms)
369      ✓ Test for /uploadCV (77ms)
370      ✓ Test for /uploadCV no login
371      ✓ Test for /uploadCV wrong user (68ms)
372      ✓ Test for /fileviewID (73ms)
373      ✓ Test for /fileviewID no login
374      ✓ Test for /fileviewID wrong user (68ms)
```




```
375      ✓ Test for /fileviewCV (71ms)
376      ✓ Test for /fileviewCV no login
377      ✓ Test for /fileviewCV wrong user (69ms)
378      ✓ Test for /fileviewIDRequest (82ms)
379      ✓ Test for /fileviewIDRequest no login
380      ✓ Test for /fileviewIDRequest wrong user (65ms)
381      ✓ Test for /fileviewCVRequest (82ms)
382      ✓ Test for /fileviewCVRequest no login
383      ✓ Test for /fileviewCVRequest wrong user (71ms)
384      ✓ Test for /viewLA.html (66ms)
385      ✓ Test for /viewLA.html no login
386      ✓ Test for /viewLA.html wrong user (67ms)
387      ✓ Test for /gestioneDocumenti.html (66ms)
388      ✓ Test for /gestioneDocumenti.html no login
389      ✓ Test for /gestioneDocumenti.html wrong user (67ms)
390      ✓ Test for /updateProfile for External Tutor (88ms)
391      ✓ Test for /updateProfile for Academic Tutor (76ms)
392      ✓ Test for /updateProfile for Student (74ms)
393      ✓ Test for /updateProfile no login
394      ✓ Test for /profile (70ms)
395      ✓ Test for /profile no login
396      ✓ Test for /logout (67ms)
397      ✓ Test for /signup for Student (68ms)
398      ✓ Test for get / (69ms)
399      ✓ Test for /signup for Academic (64ms)
400      ✓ Test for /addHostOrg (76ms)
401      ✓ Test for /addHostOrg no login
402      ✓ Test for /addHostOrg wrong user (74ms)
403      ✓ Test for /addHostOrgF (79ms)
404      ✓ Test for /addHostOrgF no login
405      ✓ Test for /addHostOrgF wrong user (79ms)
406      ✓ Test for /addExtTutor (89ms)
407      ✓ Test for /addExtTutor no login
408      ✓ Test for /addExtTutor wrong user (74ms)
409      ✓ Test for /addExtTutorF (138ms)
```



```
410      ✓ Test for /addExtTutorF no login
411      ✓ Test for /addExtTutorF wrong user (68ms)
412      ✓ Test for /deleteHostOrg (75ms)
413      ✓ Test for /deleteHostOrg no login
414      ✓ Test for /deleteExTutor (73ms)
415      ✓ Test for /deleteExTutor no login
416      ✓ Test for /compileLaExternalTutor.html (73ms)
417      ✓ Test for /compileLaExternalTutor.html no login
418      ✓ Test for /compileLaExternalTutor.html wrong user (73ms)
419      ✓ Test for /compileLAAcademicTutor.html (69ms)
420      ✓ Test for /compileLAAcademicTutor.html no login
421      ✓ Test for /compileLAAcademicTutor.html wrong user (68ms)
422      ✓ Test for /viewRequest.html (70ms)
423      ✓ Test for /viewRequest.html no login
424      ✓ Test for /viewRequest.html (64ms)
425      ✓ Test for /request.html (68ms)
426      ✓ Test for /request.html no login
427      ✓ Test for /request.html wrong user (65ms)
428      ✓ Test for /signup.html
429      ✓ Test for /getCVState (68ms)
430      ✓ Test for /getIDState (67ms)
431      ✓ Test for /deleteCV (71ms)
432      ✓ Test for /deleteCV no login
433      ✓ Test for /deleteCV wrong user (78ms)
434      ✓ Test for /deleteID (72ms)
435      ✓ Test for /deleteID no login
436      ✓ Test for /deleteID wrong user (66ms)
437      ✓ Test for /getConnectedUser (65ms)
438      ✓ Test for /updatePassword for Student (190ms)
439      ✓ Test for /updatePassword for Admin (201ms)
440      ✓ Test for /updatePassword for Academic Tutor (190ms)
441      ✓ Test for /updatePassword for External Tutor (202ms)
442      ✓ Test for /updatePassword no login
443      ✓ Test for /getReceivedMessage (70ms)
444      ✓ Test for /setReceivedMessage (74ms)
```



```
445      ✓ Test for /getReceivedNotification (74ms)
446      ✓ Test for /setReceivedNotification (74ms)
447      ✓ Test for /insertNotification (72ms)
448      ✓ Test for /getAllNotifications (72ms)
449      ✓ Test for /removeNotification (75ms)
450      ✓ Test for /removeMessage (77ms)
451      ✓ Test for /saveMessage (83ms)
452      ✓ Test for /updateMessage (75ms)
453      ✓ Test for /getMessages (70ms)
454      ✓ Test for /searchUser student (77ms)
455      ✓ Test for /searchUser academicTutor (75ms)
456      ✓ Test for /searchUser externalTutor (73ms)
457      ✓ Test for /toViewList (71ms)
458      ✓ Test for /toViewList no login
459      ✓ Test for /getUserList host (70ms)
460      ✓ Test for /getUserList academicTutor (67ms)
461      ✓ Test for /getUserList externalTutor (71ms)
462      ✓ Test for /toviewInfo host (72ms)
463      ✓ Test for /toviewInfo academic (69ms)
464      ✓ Test for /toviewInfo external (69ms)
465      ✓ Test for /toviewInfo no login
466
```



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4. Risultati test di sistema

Di seguito vengono riportati i risultati dei test di sistema in base agli attori del sistema:



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4.1 Panoramica dei risultati dei test

4.1.1 Lato Studente

Project: EasyAgreementStudent

Tests ▾ +

Search tests... 🔍

AcademicTutorListTest

ChatStudentTest

DocumentCVStudentTest

DocumentIDStudentTest

ExternalTutorListTest

HostOrganizationListTest

LoginStudentTest

LogoutStudentTest

ProfileStudentTest

UpdateStudentProfileTest

ViewNotificationStudentTest

compileLAsStudentTest

registerStudentTest

viewLAsstudent

Runs: 14 Failures: 0



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4.1.2 Lato Tutor Accademico

Project: EasyAgreementAcademicTutor

Tests ▾

+

Chat Message

Edit Profile

Login

Logout

Register

Search Chat

View Chat

View Info External Tutor

View Info Host Organization

View List External Tutor

View List Host Organization

View Notification

View Profile

View Request Document and Disapprove

View Request Document and View CV

View Request Document and View ID

View Request List

View Request, Approve and Delete Notification

Runs: 18 Failures: 0



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4.1.3 Lato *Tutor esterno*

Project: EasyAgreementExternalTutor

Tests ▾ +

Search tests... 🔍

AcademicTutorListTest

ChatExternalTutorTest

DisapproveLAExternalTutorTest

EditPasswordExternalTutorTest

EditPersonalDataExternalTutorTest

ExternalTutorLoginTest

ExternalTutorLogoutTest

HostOrganizationListTest

ViewNotificationExternalTutorTest

ViewProfileExternalTutorTest

ViewRequestsListExternalTutorTest

compileLAExternalTutorTest

Runs: 12 Failures: 0



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4.1.4 Lato Admin

Project: EasyAgreementAdministrator

Tests ▾ +

Search tests... 🔍

EditPasswordTest

Insert/DeleteExternalTutorTest

Insert/DeleteHostOrganizationTest

LoginAdminTest

LogoutAdminTest

ViewInfoExternalTutorTest

ViewInfoHostOrganizationTest

ViewListAcademicTutorTest

ViewListExternalTutorTest

ViewListHostOrganizationTest

Runs: 10 Failures: 0



5.Coverage



▼ ↑ 93.9	app/
▼ ↑ 93.24	controllers/
↑ 98.15	academicTutorControl.js
– 93.88	administratorControl.js
– 80.81	documentControl.js
↑ 98.15	externalTutorControl.js
– 100.0	hash.js
– 80.88	learningAgreementControl.js
– 100.0	loginControl.js
– 81.89	messageControl.js
– 97.83	notificationControl.js
– 96.15	registerControl.js
– 95.0	requestControl.js
↑ 96.06	studentControl.js
– 99.0	tutorControl.js
– 100.0	viewListControl.js



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▼	↑ 95.16	models/
↑	87.76	academicTutor.js
–	92.19	administrator.js
↑	88.34	externaltutor.js
–	89.32	hostorganization.js
–	76.88	learningAgreement.js
↑	82.05	message.js
–	80.9	notification.js
–	87.65	request.js
↑	84.15	student.js
–	89.4	server.js



6. Riepilogo del testing

	Numero di componenti testate	Numeri di errori trovati	Numero di errori corretti	Numero di componenti non testate
Control	13	0	0	0
Model	9	0	0	0
Integration Testing	1	1	1	0

Esempio:

Durante lo sviluppo del testing d'integrazione abbiamo riscontrato dei problemi nel settare la sessione per alcune funzionalità.

```
test > $ npm run test -- --verbose -- --testPathPattern=IntegrationTesting.js
5  var app = require('../server')
6  var agent = chai.request.agent(app)
7
8  describe('Integration Testing', function(){
9    it('Test for /compileLASTudent.html', function (done) {
10      agent
11        .get('/compileLASTudent.html')
12        .redirects(0)
13        .end(function (err, res) {
14          if (err) done(err)
15          expect(res).status(200)
16          done()
17        })
18      })
19    })
20  })
```

```
EasyAgreement Platform listening on port 8080!
Integration Testing
  1) Test for /compileLASTudent.html

0 passing (81ms)
1 failing
  1) Integration Testing
    Test for /compileLASTudent.html:
      Uncaught AssertionError: expected { Object { _events, _eventsCount, ... } } to have status code 200 but got 302
      + expected - actual
      -302
      +200
      at /home/alessio/Scrivania/EasyAgreement/test/integrationTesting.js:15:29
      at Test.Request.callback (node_modules/superagent/lib/node/index.js:716:12)
      at IncomingMessage.<anonymous> (node_modules/superagent/lib/node/index.js:916:18)
      at endReadableNT (stream_readable.js:1215:12)
      at processTicksAndRejections (internal/process/task_queues.js:84:21)
```

In questo esempio il problema riguardava la compilazione del Learning Agreement da parte dello studente.



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Siamo riusciti a capire il problema e lo abbiamo risolto inserendo le richieste al server, dopo quella del login, quando necessario. In questo modo era l'utente loggato al sistema ad eseguire queste funzionalità. Questo è il modo con il quale abbiamo risolto.

```
test > js integrationTesting.js > describe('Integration Testing') callback
8 describe('Integration Testing', function() {
9   it('Test for /compileLAsStudent.html', function (done) {
10     //bisogna prima effettuare il login per settare la sessione
11     agent
12     .post('/login')
13     .redirects(0)
14     .send({ username: 'd.devito@studenti.unisa.it', password: 'DannyDeVito1' })
15     .end(function (err, res) {
16       if (err) done(err)
17       expect(res).to.have.cookie('logEff')
18       agent
19       .get('/compileLAsStudent.html')
20       .redirects(0)
21       .end(function (err, res) {
22         if (err) done(err)
23         expect(res).status(200)
24         done()
25       })
26     })
27   })
28 })
```

```
aleccio@aleccio:~/Scrivania/EasyAgreement$ npm test test/integrationTesting.js
> easyagreement@1.0.0 test /home/aleccio/Scrivania/EasyAgreement
> nyc --reporter=html --reporter=text mocha --exit "test/integrationTesting.js"

EasyAgreement Platform listening on port 8080!
Integration Testing
  ✓ Test for /compileLAsStudent.html (167ms)

1 passing (199ms)
```

File	% Stmts	% Branch	% Funcs	% Lines	Uncovered Line #s
All files	9.68	1.04	4.11	10.71	



7. Glossario

- RAD (Requirement Analysis Document): Documento di Raccolta e analisi dei Requisiti; contiene l'elenco dei requisiti funzionali e non funzionali individuati in fase di individuazione degli stessi e la loro analisi sotto forma di scenari e casi d'uso. I mock-up mostrano una possibile implementazione dell'interfaccia del sistema.
- SDD (System Design Document): Documento all'interno del quale viene riportata la progettazione del sistema come risultato di una prima fase di modellazione: contiene una suddivisione ad alto livello del sistema nei sottosistemi che lo comporranno.
- ODD (Object Design Document): Documento che riporta e analizza gli oggetti che compongono il sistema analizzando le componenti a più basso livello, riportandole così come saranno implementate.
- TCS (Test Case Specification): Documento che riporta i casi di test pianificati.