

System Administration of WeBWorK & the MSC

Department of Mathematics, HKUST



Topics

- ▶ Course Management
- ▶ Maintain Student Records
- ▶ Housekeeping
- ▶ Security
- ▶ Backend Infrastructure
- ▶ WeBWork Quizzes in Math Support Center
- ▶ Future Plans

Course Management

- ▶ Before every semester starts
- ▶ Add Course
- ▶ Rename Course
- ▶ Delete Course
- ▶ Archive Course
- ▶ Unarchive Course
- ▶ Upgrade Courses
- ▶ Manage Locations

The screenshot shows the WeBWorK @ HKUST Course Administration page. The top navigation bar is blue with the WeBWorK logo and the text 'WeBWorK @ HKUST'. On the right, it says 'Logged in as macook. Log Out'. Below the navigation bar, there's a 'Main Menu' sidebar with links for Courses, Homework Sets, Grades, Instructor Tools, and Report bugs. The main content area is titled 'webwork → Course Administration' and 'Course Administration'. It contains a list of links for course management: Add Course, Rename Course, Delete Course, Archive Course, Unarchive Course, Upgrade courses, and Manage Locations. Below this, there are two sections: 'Courses' and 'Archived Courses'. The 'Courses' section lists 26 courses, including 2013 FALL, 2013 SPRING, and 2014 SPRING courses. The 'Archived Courses' section lists 16 archived courses, including 2011 SPRING, 2012 FALL, and 2013 FALL courses.

WeBWorK @ HKUST Logged in as macook. Log Out

Main Menu

- Courses**
- Homework Sets**
- Grades**
- Instructor Tools**
 - Classlist Editor
 - Homework Sets Editor
 - Library Browser
 - Library Browser 2
 - Statistics
 - Student Progress
 - Scoring Tools
 - Email
 - File Manager
 - Course Configuration
- Help
- Report bugs**

webwork → Course Administration

Course Administration

[Add Course](#) | [Rename Course](#) | [Delete Course](#) | [Archive Course](#) | [Unarchive Course](#) | [Upgrade courses](#) | [Manage Locations](#)

Courses

1. [2013 FALL MATH1003](#)
2. [2013 FALL MATH1013](#)
3. [2013 FALL MATH1014](#)
4. [2013 FALL MATH2011](#)
5. [2013 FALL MATH2023](#)
6. [2013 FALL MATH2111](#)
7. [2013 FALL MATH2121](#)
8. [2013 FALL MATH2131](#)
9. [2013 FALL MATH6770](#)
10. [2013 SPRING MATH1013](#)
11. [2013 SPRING MATH1014](#)
12. [2013 SPRING MATH1018](#)
13. [2013 SPRING MATH1020](#)
14. [2013 SPRING MATH2010](#)
15. [2013 SPRING MATH2011](#)
16. [2013 SPRING MATH2021](#)
17. [2013 SUMMER MATH0001](#)
18. [2014 SPRING MATH1013](#)
19. [2014 SPRING MATH1014](#)
20. [2014 SPRING MATH2011](#)
21. [2014 SPRING MATH2023](#)
22. [2014 SPRING MATH2111](#)
23. [2014 SPRING MATH2121](#)
24. [2014 SUMMER MATH2111](#)
25. [template](#)
26. [Test](#)

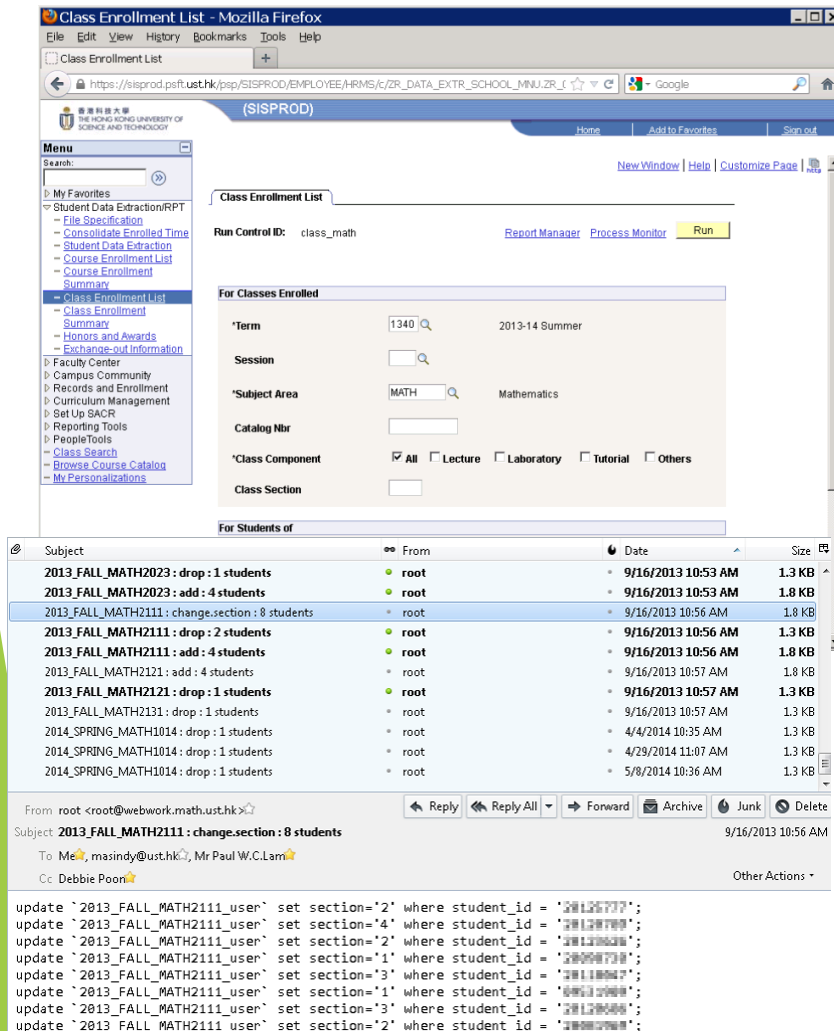
Archived Courses

1. [2011_SPRING_MATH2011.tar.gz](#)
2. [2011_SPRING_MATH2111.tar.gz](#)
3. [2012_FALL_MATH1003.tar.gz](#)
4. [2012_FALL_MATH1013.tar.gz](#)
5. [2012_FALL_MATH1018.tar.gz](#)
6. [2012_FALL_MATH2011.tar.gz](#)
7. [2012_FALL_MATH2011x.tar.gz](#)
8. [2012_FALL_MATH2021.tar.gz](#)
9. [2012_FALL_MATH2023.tar.gz](#)
10. [2012_FALL_MATH2111.tar.gz](#)
11. [2012_FALL_MATH2131.tar.gz](#)
12. [2012_SPRING_MATHdemo_1003.tar.gz](#)
13. [2013_FALL_MATH1013z.tar.gz](#)
14. [2013_SPRING_MATH2023.tar.gz](#)
15. [2013_SPRING_MATH2111.tar.gz](#)
16. [INVIGILATORS.tar.gz](#)

Page generated at 06/08/2014 at 05:31pm HKT / Dept of Math
WeBWorK © 1996-2011 [The WeBWorK Project](#)

Maintain Student Records

- Extract students' records from SIS to the Math Grading System then to WeBWork at every 10:30AM



Class Enrollment List - Mozilla Firefox

Search: [New Window](#) [Help](#) [Customize Page](#)

Menu

- My Favorites
- Student Data Extraction/RPT
 - File Specification
 - Consolidate Enrolled Time
 - Student Data Extraction
 - Course Enrollment List
 - Course Enrollment Summary
- Class Enrollment List
 - Class Enrollment Summary
 - Honors and Awards
 - Exchange-out Information
- Faculty Center
- Campus Community
- Records and Enrollment
- Curriculum Management
- Set Up SACR
- Reporting Tools
- PeopleTools
- Class Search
- Browse Course Catalog
- My Personalizations

Class Enrollment List

Run Control ID: class_math [Report Manager](#) [Process Monitor](#) [Run](#)

For Classes Enrolled

*Term: 1340 2013-14 Summer

Session:

*Subject Area: MATH Mathematics

Catalog Nbr:

*Class Component: ☒ All ☐ Lecture ☐ Laboratory ☐ Tutorial ☐ Others

Class Section:

For Students of

Subject	From	Date	Size
2013_FALL_MATH2023 : drop : 1 students	root	9/16/2013 10:53 AM	1.3 KB
2013_FALL_MATH2023 : add : 4 students	root	9/16/2013 10:53 AM	1.8 KB
2013_FALL_MATH2111 : change.section : 8 students	root	9/16/2013 10:56 AM	1.8 KB
2013_FALL_MATH2111 : drop : 2 students	root	9/16/2013 10:56 AM	1.3 KB
2013_FALL_MATH2111 : add : 4 students	root	9/16/2013 10:56 AM	1.8 KB
2013_FALL_MATH2121 : add : 4 students	root	9/16/2013 10:57 AM	1.8 KB
2013_FALL_MATH2121 : drop : 1 students	root	9/16/2013 10:57 AM	1.3 KB
2013_FALL_MATH2131 : drop : 1 students	root	9/16/2013 10:57 AM	1.3 KB
2014_SPRING_MATH1014 : drop : 1 students	root	4/4/2014 10:35 AM	1.3 KB
2014_SPRING_MATH1014 : drop : 1 students	root	4/29/2014 11:07 AM	1.3 KB
2014_SPRING_MATH1014 : drop : 1 students	root	5/8/2014 10:36 AM	1.3 KB

From root <root@webwork.math.ust.hk>

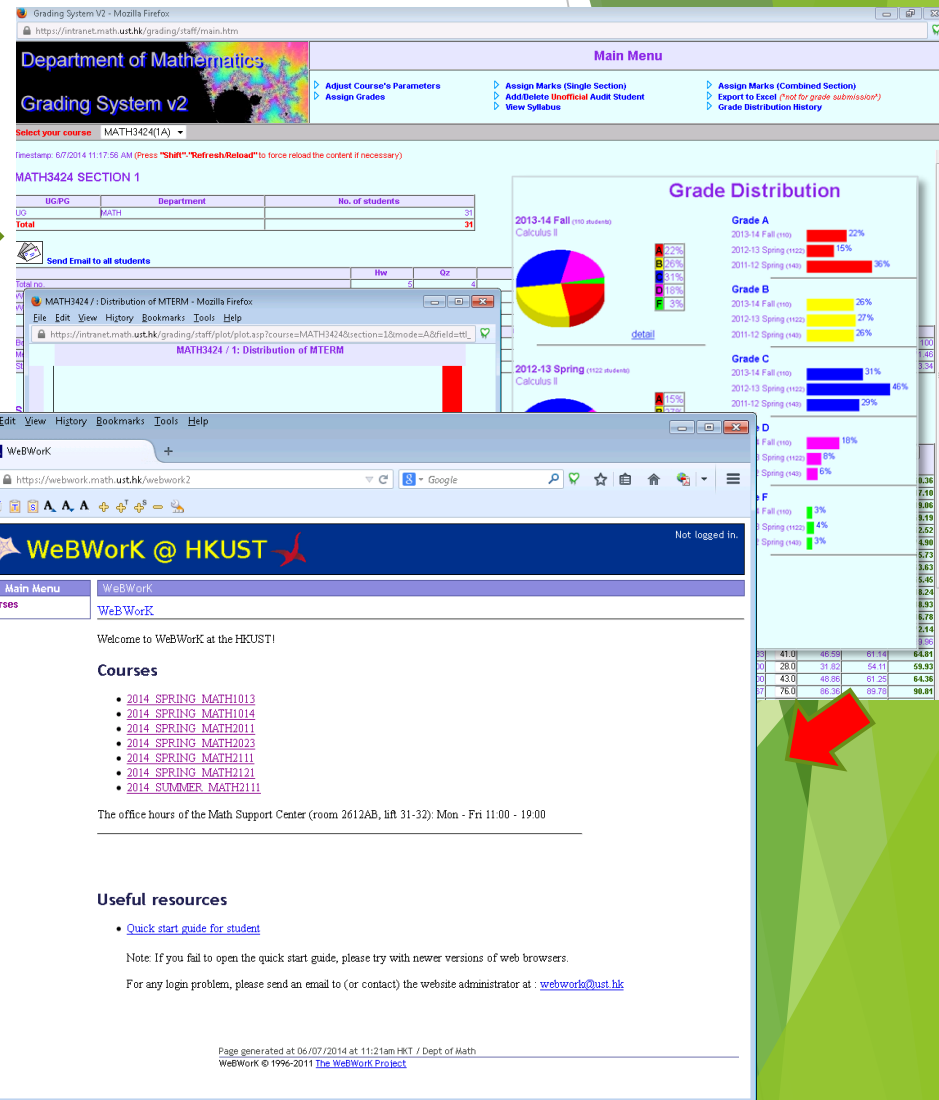
Subject: 2013_FALL_MATH2111 : change.section : 8 students 9/16/2013 10:56 AM

To: Me, masindy@ust.hk, Mr Paul W.C.Lam

Cc: Debbie Poon

Other Actions

```
update `2013_FALL_MATH2111_user` set section='2' where student_id = '20130777';
update `2013_FALL_MATH2111_user` set section='4' where student_id = '20130777';
update `2013_FALL_MATH2111_user` set section='2' where student_id = '20130778';
update `2013_FALL_MATH2111_user` set section='1' where student_id = '20130778';
update `2013_FALL_MATH2111_user` set section='3' where student_id = '20130779';
update `2013_FALL_MATH2111_user` set section='1' where student_id = '20130780';
update `2013_FALL_MATH2111_user` set section='1' where student_id = '20130780';
update `2013_FALL_MATH2111_user` set section='3' where student_id = '20130780';
update `2013_FALL_MATH2111_user` set section='2' where student_id = '20130780';
```



Grading System v2 - Mozilla Firefox

http://intranet.math.ust.hk/grading/staff/main.htm

Department of Mathematics

Grading System v2

Main Menu

- Adjust Course's Parameters
- Assign Grades
- Assign Marks (Single Section)
- Add/Delete Unofficial Audit Student
- View Syllabus
- Assign Marks (Combined Section)
- Export to Excel (not for grade submission)
- Grade Distribution History

Select your course: MATH3424(1A)

Timestamp: 6/7/2014 11:17:56 AM (Press "Shift" + "Refresh/Reload" to force reload the content if necessary)

MATH3424 SECTION 1

UGPG	Department	No. of students
UGPG	MATH	31
Total		31

[Send Email to all students](#)

Grade Distribution

2013-14 Fall (110 students)

Calculus II

Grade A

- 2013-14 Fall (110): 22%
- 2012-13 Spring (112): 15%
- 2011-12 Spring (145): 36%

Grade B

- 2013-14 Fall (110): 35%
- 2012-13 Spring (112): 27%
- 2011-12 Spring (145): 26%

Grade C

- 2013-14 Fall (110): 31%
- 2012-13 Spring (112): 46%
- 2011-12 Spring (145): 25%

2012-13 Spring (112 students)

Calculus II

Grade A

- 2012-13 Spring (112): 15%
- 2011-12 Spring (145): 36%

2011-12 Spring (145 students)

Calculus II

Grade A

- 2011-12 Spring (145): 36%

WeBWork @ HKUST

Not logged in.

Main Menu

Courses

Welcome to WeBWork at the HKUST!

Courses

- 2014_SPRING_MATH1013
- 2014_SPRING_MATH1014
- 2014_SPRING_MATH2011
- 2014_SPRING_MATH2023
- 2014_SPRING_MATH2111
- 2014_SPRING_MATH2121
- 2014_SUMMER_MATH2111

The office hours of the Math Support Center (room 2612AB, 1st 31-32) Mon - Fri 11:00 - 19:00

Useful resources

- [Quick start guide for student](#)

Note: If you fail to open the quick start guide, please try with newer versions of web browsers.

For any login problem, please send an email to (or contact) the website administrator at: webwork@ust.hk

Page generated at 06/07/2014 at 11:21am HKT / Dept of Math

WeBWork © 1996-2011 [The WeBWork Project](#)

Maintain Student Records

- Automatic Score Synchronization from WeBWork to our existing information system by setting-up SQL Views in the MySQL database

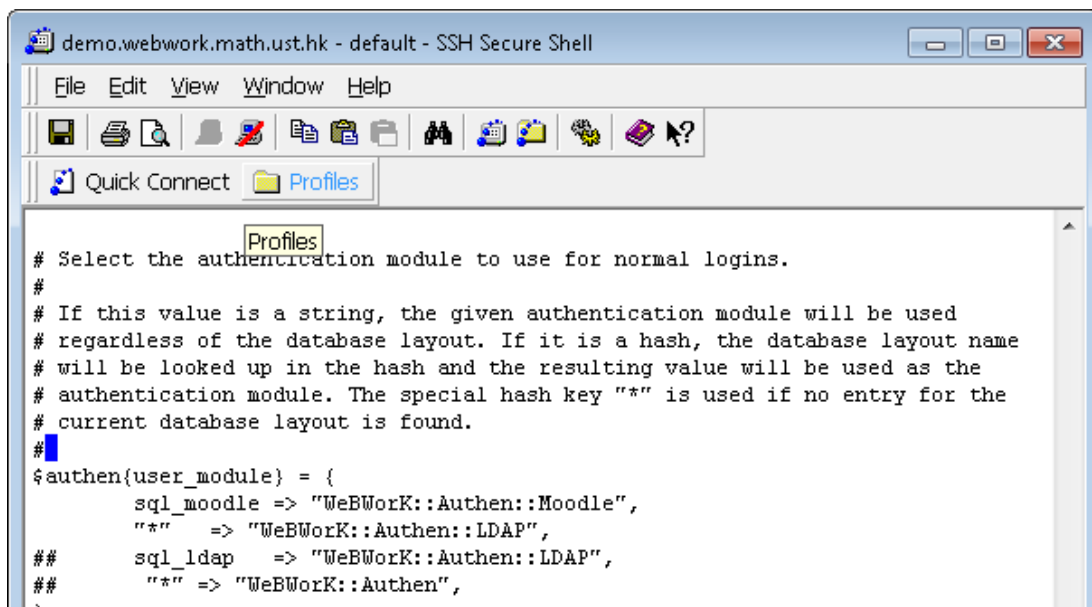
The screenshot shows the WeBWork @ HKUST website. The header includes the WeBWork logo and a 'Not logged in' status. A main menu on the left lists 'Courses'. The main content area displays a list of courses for the 2014 Spring and Summer semesters, including MATH1013, MATH1014, MATH2011, MATH2023, MATH2111, MATH2121, and MATH2111. Below the list, the office hours of the Math Support Center are provided. A 'Useful resources' section includes a link to a quick start guide for students and a note about login problems. The footer contains page generation information and copyright details.



The screenshot shows the Grading System v2 interface. The header includes the Department of Mathematics logo and a 'Main Menu' with options like 'Adjust Course's Parameters', 'Assign Grades', 'Assign Marks (Single Section)', 'Add/Delete Unofficial Audit Student', 'View Syllabus', 'Assign Marks (Combined Section)', 'Export to Excel (not for grade submission)', and 'Grade Distribution History'. The main content area displays details for the course MATH3424 / 1: Distribution of MTERM. It includes a table with columns for 'UG-IPG', 'Department', and 'No. of students', showing a total of 31 students. Below the table is a 'Send Email to all students' button. The right side of the interface shows a 'Grade Distribution' section with pie charts and bar graphs for the 2013-14 Fall, 2012-13 Spring, and 2011-12 Spring semesters. The bottom of the interface displays a table with columns for 'Total no.', 'UG-IPG', 'Department', and 'No. of students', showing a total of 31 students.

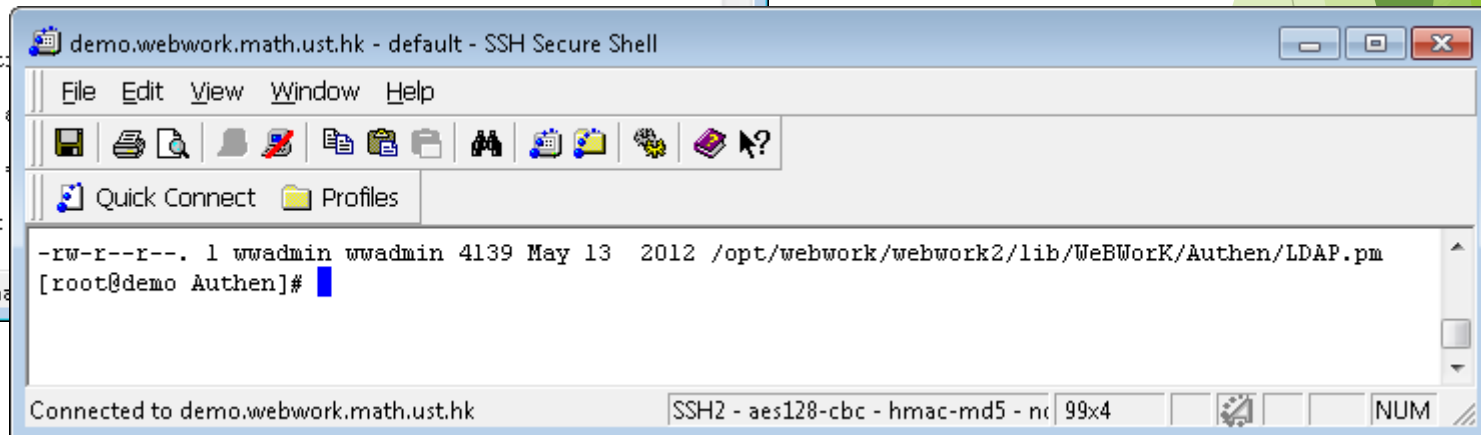
WeBWork Authentication

- ▶ Authenticating WeBWork logins against the HKUST LDAP database



A screenshot of an SSH Secure Shell window titled "demo.webwork.math.ust.hk - default - SSH Secure Shell". The window has a menu bar (File, Edit, View, Window, Help) and a toolbar with various icons. Below the toolbar is a "Quick Connect" section with a "Profiles" button. The main text area shows configuration comments and code for authentication modules. A "Profiles" tooltip is visible over the "Profiles" button.

```
# Select the authentication module to use for normal logins.
#
# If this value is a string, the given authentication module will be used
# regardless of the database layout. If it is a hash, the database layout name
# will be looked up in the hash and the resulting value will be used as the
# authentication module. The special hash key "*" is used if no entry for the
# current database layout is found.
#
$authen{user_module} = {
    sql_moodle => "WeBWorK::Authen::Moodle",
    "*" => "WeBWorK::Authen::LDAP",
##
    sql_ldap   => "WeBWorK::Authen::LDAP",
##
    "*" => "WeBWorK::Authen",
};
```



A screenshot of an SSH Secure Shell window titled "demo.webwork.math.ust.hk - default - SSH Secure Shell". The window has a menu bar (File, Edit, View, Window, Help) and a toolbar with various icons. Below the toolbar is a "Quick Connect" section with a "Profiles" button. The main text area shows the output of a command execution. The status bar at the bottom indicates the connection details.

```
-rw-r--r--. 1 wwadmin wwadmin 4139 May 13 2012 /opt/webwork/webwork2/lib/WeBWorK/Authen/LDAP.pm
[root@demo Authen]#
```

Connected to demo.webwork.math.ust.hk SSH2 - aes128-cbc - hmac-md5 - nc 99x4 NUM

Housekeeping

- ▶ Performance Tuning
- ▶ System Upgrade (Linux & WeBWork)
- ▶ Clean Out Temporary Files such as PDF, PNG, GIF files
- ▶ Disk Space & Inode Monitoring

The image displays two terminal windows from a web browser, both connected to the host `webwork.math.ust.hk` via SSH. The left window shows the output of `pwd` and `ls | head -10` commands, listing files in `/opt/webwork/courses/2014_SPRING_MATH1014/html/tmp/`. The right window shows the output of `df -h` and `df -i` commands, displaying disk space and inode usage for various filesystems.

Left Terminal Window:

```

[root@webwork gif]# pwd
/opt/webwork/courses/2014_SPRING_MATH1014/html/tmp/
[root@webwork gif]# ls | head -10
alwayseid-13687-setHomework-10-prob4--HGM4-13-1-30.p
alwayseid-1370-setHomework-7prob5imagel.png
alwayseid-14843-setHomework-11-probl--anl2_3_25.gif
alwayseid-2331-setHomework-1prob5imagel.png
alwayseid-295-setHomework-10problimagel.png
alwayseid-604-setHomework-1-probl0--osu_in_20_3.gif
alwayseid-604-setHomework-1-probl1--osu_in_20_5.gif
alwayseid-604-setHomework-1-probl2--osu_in_20_2.gif
alwayseid-7735-setHomework-5-prob4--donut.gif
alwayseid-7735-setHomework-5-prob4--leftdonutslice.g
[root@webwork gif]# ls -l | wc -l
30576
[root@webwork gif]#
[root@webwork gif]#

```

Right Terminal Window:

```

Filesystem      Size  Used Avail Use% Mounted on
/dev/xvda1      79G   8.1G   67G  11% /
tmpfs           3.9G   228K   3.9G   1% /dev/shm
/dev/xvdb1      79G   7.5G   68G  10% /opt
Filesystem      Inodes IUsed IFree IUse% Mounted on
/dev/xvda1       5.0M   392K   4.7M   8% /
tmpfs            984K     6   984K   1% /dev/shm
/dev/xvdb1       5.1M   534K   4.5M  11% /opt
[root@webwork gif]#

```

Both windows show a status bar at the bottom indicating the connection details: `Connected to webwork.math.ust.hk` and the SSH cipher suite `SSH2 - aes128-cbc - hmac-md5 - n`.

Security

- Secure the WeBWork System by running a Web Vulnerability Scanner

The screenshot displays the Netsparker 3.1.6.0 (Community Edition) web vulnerability scanner interface. The main window shows the results of a scan on the target website **webwork.math.ust.hk**.

Site Map: The left sidebar shows the site map, including the root directory and various subdirectories like `webwork2`, `webwork2_files`, and `css`.

Dashboard: The central dashboard displays the overall scan results. It shows a **MEDIUM (1)** severity finding and **INFORMATION (4)** findings. The **Attacking (5)** section lists the active attacks being performed.

Issues (5): The bottom section lists the identified issues, including:

- Weak Ciphers Enabled
- Forbidden Resource
- E-mail Address Disclosure
- HTTP Strict Transport Security (HSTS) Policy Not Enabled
- [Possible] Internal Path Disclosure (*nix)

Crawling & Attacking (2/3)... progress bar shows 54% completion. The status bar at the bottom indicates "Crawl & Attack phase started." and "Proxy: System[None]".

Security

► Intrusion Detection and Prevention Systems

The screenshot displays a Linux terminal environment with several windows open. On the left, a window titled 'xosview@web' shows system statistics for CPU, memory, disk, and swap. The main terminal window, titled 'root@webwork: ~/Desktop', shows a logwatch message dated June 7, 2014, at 03:21:12 HKT. The message indicates that logwatch 7.3.6 processed logs from yesterday, showing that the system is under attack. A list of requests with error responses is shown, including 400 Bad Request, 403 Forbidden, and 404 Not Found. A terminal window titled 'root@webwork: /var/log/httpd' shows a list of HTTP requests, including GET requests for various files and directories. At the bottom, an email notification is displayed, stating 'www.math.ust.hk is under attacked. The following IPs are blocked. Please check /root/blacklist if necessary.' The email is from root@www.math.ust.hk and is dated 5/18/2014 8:50 PM. The subject line is 'www.math.ust.hk is under attacked. The following IPs are blocked. Please check /root/blacklist if necessary.' The email body lists several IP addresses, with '1375 221.235.205.206' circled in red.

ALPINE 2.03(1266) MESSAGE TEXT Folder: INBOX Message

Date: Sat, 7 Jun 2014 03:21:12 +0800 (HKT)
From: logwatch@webwork.math.ust.hk
To: root@webwork.math.ust.hk
Subject: Logwatch for webwork.math.ust.hk (Linux)

Logwatch 7.3.6 (05/19/07) #####
Processing Initiated: Sat Jun 7 03:21:12 2014
Date Range Processed: yesterday
(2014-Jun-06)
Period is day.
Detail Level of Output: 0
Type of Output: unformatted
Logfiles for Host: webwork.math.ust.hk
#####

----- httpd Begin -----

Requests with error response

400 Bad Request
/: 101 Time(s)
403 Forbidden
/cgi-bin/wlogin.cgi: 1
404 Not Found
/apple-touch-icon-preco
/apple-touch-icon.png:
/browserconfig.xml: 2 T
/robots.txt: 10 Time(s)
/webwork2_files/tmp/equ

----- httpd

From root <root@www.math.ust.hk>
Subject **www.math.ust.hk is under attacked. The following IPs are blocked. Please check /root/blacklist if necessary.**
To Shek Lung LAI, Mr Paul W.C.Lam, Me
1375 221.235.205.206

Subject	From	Date	Size
www.math.ust.hk is under attacked. The following IPs are blocked.	root	4/17/2014 1:50 AM	1.2 KB
www.math.ust.hk is under attacked. The following IPs are blocked.	root	4/19/2014 6:50 PM	1.2 KB
www.math.ust.hk is under attacked. The following IPs are blocked.	root	4/20/2014 2:50 AM	1.2 KB
www.math.ust.hk is under attacked. The following IPs are blocked.	root	4/22/2014 10:50 AM	1.2 KB
www.math.ust.hk is under attacked. The following IPs are blocked.	root	4/25/2014 1:50 PM	1.2 KB
www.math.ust.hk is under attacked. The following IPs are blocked.	root	4/26/2014 12:50 PM	1.2 KB
www.math.ust.hk is under attacked. The following IPs are blocked.	root	5/10/2014 12:50 AM	1.2 KB
www.math.ust.hk is under attacked. The following IPs are blocked.	root	5/15/2014 9:50 PM	1.2 KB
www.math.ust.hk is under attacked. The following IPs are blocked.	root	5/18/2014 5:50 PM	1.2 KB
www.math.ust.hk is under attacked. The following IPs are blocked.	root	5/18/2014 8:50 PM	1.2 KB
www.math.ust.hk is under attacked. The following IPs are blocked.	root	5/20/2014 10:50 PM	1.2 KB

From root <root@www.math.ust.hk>
Subject **www.math.ust.hk is under attacked. The following IPs are blocked. Please check /root/blacklist if necessary.**
To Shek Lung LAI, Mr Paul W.C.Lam, Me
1375 221.235.205.206

Our First WeBWork Machine

- ▶ Intel Core-i7 desktop PC
- ▶ 16GB memory
- ▶ 2 x 1TB hard drive in RAID 1 mirror mode



Computer Server

- ▶ IBM x3550 M4 computer server
- ▶ 2 x Intel Xeon E5-2670 CPU (16 cores in total)
- ▶ 32GB memory



Backend Infrastructure - Virtualization Technology

- Advantages: Easier Management, Robust Hardware, System Duplication

The screenshot illustrates a Xen virtualization environment. The main window shows the Virtual Machine Manager interface with a list of virtual machines:

Name	ID	Status	CPU usage	CPUs	Memory usage
vm1	xen	Active	0.92 %	16	31.40 GB
Domain-0	0	Running	0.41 %	16	15.38 GB
intranet.math.ust.hk	19	Running	0.46 %	4	4.00 GB
mams01	-	Shutoff	0.00 %	4	4.00 GB
math.ust.hk	-	Shutoff	0.00 %	2	2.00 GB
webwork	7	Running	0.03 %	4	8.00 GB
www.math.ust.hk	17	Running	0.02 %	4	4.00 GB

The terminal window displays system statistics and a list of running processes:

```
top - 11:45:58 up 143 days, 20:55, 11 users, load average: 0.03, 0.02, 0.00
Tasks: 289 total, 1 running, 288 sleeping, 0 stopped, 0 zombie
Cpu0 : 0.0%us, 0.7%sy, 0.0%ni, 99.3%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st
Cpu1 : 0.0%us, 0.0%sy, 0.0%ni, 100.0%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st
Cpu2 : 0.0%us, 0.0%sy, 0.0%ni, 100.0%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st
Cpu3 : 0.0%us, 0.0%sy, 0.0%ni, 100.0%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st
Mem: 8858856k total, 7289636k used, 848420k free, 652848k buffers
Swap: 0k total, 0k used, 0k free, 3855724k cached
```

The web browser window shows a search page with the following content:

Search Help and Support Center

Tools and Updates

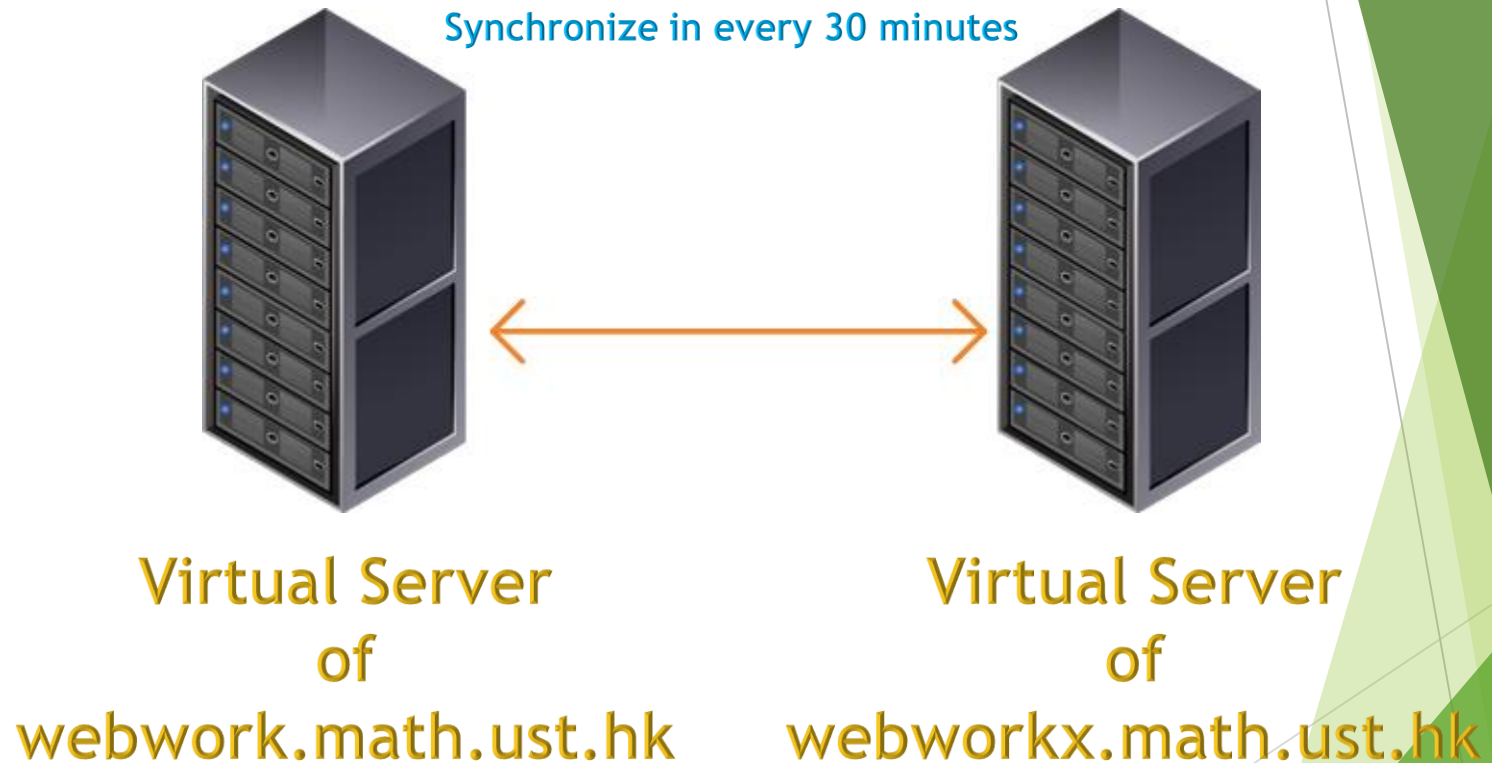
- Administrative Tools
- More Tools
- Windows Update
- Computer and Domain Name Information
- Internet Explorer Enhanced Security Configuration

See Also

- Help and Support
- Microsoft TechNet
- Deployment and Resource Kits
- List of Common Administrative Tasks
- Windows Server Communities
- What's New
- Strategic Technology Protection Program

Backend Infrastructure - The Shadow WeBWork

- High Availability



Math Support Center - Bar Code Based Attendance System

- Provide background information of the students who need help
- Collect the statistics

Math Support Center Attendance Report

<< May 2014 >>						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 A	2 A	3
4 A	5 A	6 A	7 A	8 A	9 A	10
11 A	12 A	13 A	14 A	15 A	16 A	17
18 A	19 A	20 A	21 A	22 A	23 A	24
25 A	26 A	27 A	28 A	29 A	30 A	31

Number of visits by students: 2485

Number of students visited MSC: 635



16011001 (in) (MATH**) math2011,math2111	18:50	16011001 (in) (MATH**) math2011,math2111	18:56
16011001 (in) (MATH**) math2011,math2111	18:52	16011001 (in) (MATH**) math2011,math2111	18:58
16011001 (out) (MATH**) math2011,math2111	18:47	16011001 (in) (MATH**) math2011,math2111	18:58
16011001 (out) (MATH**) math2111	18:55	16011001 (out) (MATH**) math2111	18:58
16011001 (out) (MATH**) math2011,math2111	18:56	16011001 (out) (MATH**) math2111	18:58
16011001 (out) (MATH**) math2111	18:58	16011001 (in) (MATH**) math2011,math2111	18:58
16011001 (out) (MATH**) math2011,math2111	18:58	16011001 (out) (MATH**) math2011,math2111	18:59
16011001 (out) (MATH**) math2011,math2111	18:59	16011001 (out) (MATH**) math2011,math2111	19:00
16011001 (out) (MATH**) math2111	19:00	16011001 (in) (MATH**) math2011,math2111	19:01
16011001 (out) (MATH**) math2111	19:01	16011001 (out) (MATH**) math2011,math2111	19:01
16011001 (out) (MATH**) math2011,math2111	19:02	16011001 (out) (MATH**) math2011,math2111	19:02
16011001 (out) (MATH**) math2011,math2111	19:02	16011001 (out) (MATH**) math2011,math2111	19:02
16011001 (out) (MATH**) math2011,math2111	19:06	16011001 (out) (MATH**) math2011,math2111	19:06

Number of student(s) IN: 61

Number of staff IN: 14

Room 2612AB: 8 May 2014 10:20 - 19:20

Conducting Quiz in MSC

- ▶ Booking System
- ▶ Private Network Design
- ▶ IP Restriction of WeBWork
- ▶ Firewall control to restrict the outside access

Online Reservation System - Math Support Center

Greeting! WONG, Cook Ho Wing!

Event: Gateway Quiz 2 for MATH2111 (5/5/2014 - 5/9/2014)
Accept Reservation from 4/28/2014 9:00:00 AM to 6/8/2014 12:00:00 PM

As of 6/7/2014 9:37:24 PM

5 May 2014	7 May 2014	8 May 2014	9 May 2014
10:30 AM - 11:15 AM 18 stations are available Click to Book	10:30 AM - 11:15 AM 16 stations are available Click to Book	10:30 AM - 11:15 AM 11 stations are available Click to Book	10:30 AM - 11:15 AM 17 stations are available Click to Book
11:15 AM - 12:00 PM 18 stations are available Click to Book	11:15 AM - 12:00 PM 13 stations are available Click to Book	11:15 AM - 12:00 PM 5 stations are available Click to Book	11:15 AM - 12:00 PM 1 station is available Click to Book
6:30 PM - 7:15 PM 15 stations are available Click to Book	6:30 PM - 7:15 PM No station is available	6:30 PM - 7:15 PM 2 stations are available Click to Book	6:30 PM - 7:15 PM 6 stations are available Click to Book

Report of the Online Reservation S...

intranet.math.ust.hk/math.support.center/booking/admin/report.asp

Event: Gateway Quiz 2 for MATH2111 (5/5/2014 - 5/9/2014)
Accept Reservation: from 4/28/2014 9:00:00 AM to 5/2/2014 12:00:00 PM

As of 6/7/2014 9:38:32 PM
Number of MATH2111 students without making reservation: 87

Number of booking: 118



Time	PC#	Name	ID	Email	Booking time	From IP	Del
5/5/2014 10:30:00 AM	5	SAMUELLA, Thomas	00040001	tsamuel@ust.hk	4/29/2014 12:17:01 PM	143.89.211.24	del
			26 020001	tsamuel@ust.hk	4/29/2014 3:46:27 PM	143.89.176.245	del
			26 020002	tsamuel@ust.hk	4/28/2014 9:53:46 AM	14.199.15.229	del
			26 020003	tsamuel@ust.hk	4/29/2014 1:33:59 PM	202.125.230.83	del
			26 020004	tsamuel@ust.hk	4/29/2014 9:11:43 PM	143.89.175.45	del
			26 020005	tsamuel@ust.hk	4/28/2014 8:41:40 PM	143.89.224.118	del
			26 020006	tsamuel@ust.hk	4/28/2014 11:56:54 PM	143.89.68.70	del
			26 020007	tsamuel@ust.hk	5/2/2014 3:05:05 AM	143.89.174.118	del
			26 020008	tsamuel@ust.hk	5/2/2014 11:34:23 AM	143.89.225.93	del
			26 020009	tsamuel@ust.hk	4/28/2014 7:36:27 PM	14.199.213.117	del
			26 020010	tsamuel@ust.hk	4/28/2014 9:00:55 AM	123.136.11.148	del
			26 020011	tsamuel@ust.hk	4/29/2014 3:02:40 PM	175.159.110.154	del
			26 020012	tsamuel@ust.hk	4/28/2014 10:01:51 AM	175.159.101.240	del
			26 020013	tsamuel@ust.hk	4/29/2014 3:23:44 PM	219.73.89.134	del
			26 020014	tsamuel@ust.hk	4/30/2014 11:11:01 AM	124.217.186.23	del
			26 020015	tsamuel@ust.hk	4/28/2014 1:30:02 PM	182.239.107.21	del
			26 020016	tsamuel@ust.hk	4/29/2014 11:16:20 PM	119.247.245.116	del
			26 020017	tsamuel@ust.hk	4/29/2014 8:45:09 PM	218.253.199.208	del
			26 020018	tsamuel@ust.hk	5/2/2014 1:22:34 AM	112.119.167.55	del
			26 020019	tsamuel@ust.hk	4/28/2014 3:20:41 PM	175.159.103.40	del
			26 020020	tsamuel@ust.hk	4/28/2014 4:21:09 PM	143.89.16.117	del
			26 020021	tsamuel@ust.hk	4/30/2014 11:16:39 AM	143.89.175.163	del

Mailing Lists

- 5/5/2014
- 5/7/2014
- 5/8/2014
- 5/9/2014

Future Plans

- WeBWork 2.8 with the latest version of the OpenProblemLibrary (OPL)

 **WeBWork**  **MAA** MATHEMATICAL ASSOCIATION OF AMERICA Logged in as admin. [Log Out](#)

[webwork](#) → [test1](#) → [homework1](#) → 11

HomeWork1: Problem 11 [Prev](#) [Up](#) [Next](#) This set is visible to students.

(1 pt) [Library/UVA-Stew5e/setUVA-Stew5e-C03S01-DerivPolyExps/3-1-58.pg](#)

Find a and b so that the function

$$f(x) = \begin{cases} 4x^3 - 8x^2 + 8, & x < -2, \\ ax + b, & x \geq -2 \end{cases}$$

is both continuous and differentiable.

$a =$

$b =$

Note: You can earn partial credit on this problem.

[Edit2](#) [Edit3](#)

☐ Show correct answers

[Preview Answers](#) [Check Answers](#) [Submit Answers](#)


You have attempted this problem 0 times.
You have unlimited attempts remaining.

[Show Past Answers](#)

[Email instructor](#)

This set is visible to students.

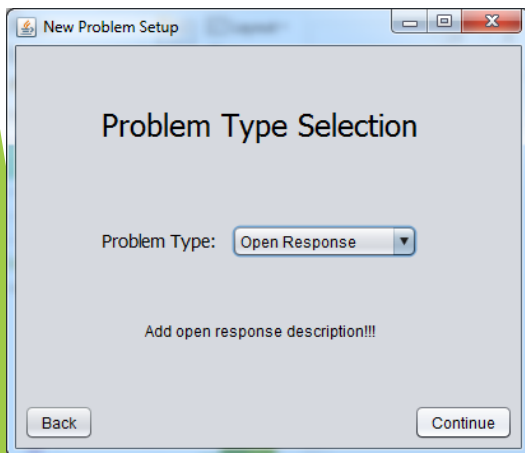
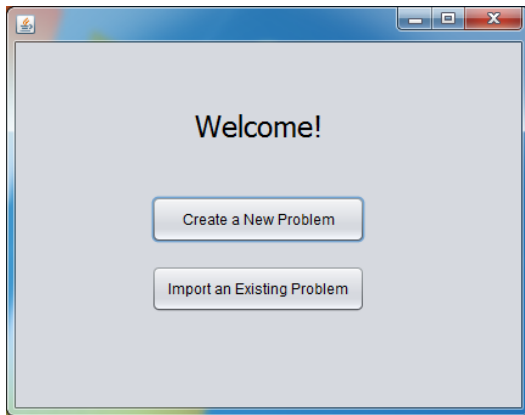
Page generated at 06/07/2014 at 08:48am EDT
WeBWork © 1996-2014 | theme: math3 | ww_version: 2.8 | pg_version: 2.8.1 | [The WeBWork Project](#)

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Future Plans

- WbWrkGUI - Graphical User Interface for simple WeBWork Problem Authoring



A screenshot of the 'Open Response' window. It contains several input fields and buttons for creating a problem. The 'Problem Name' field has a placeholder '<Enter the Problem Name>'. The 'File Destination' field has a placeholder '<Enter the File Destination>' and a 'Select Destination' button. The 'Problem Text' field contains the text 'What is the result of $\int_1^2 2x \, dx$?'. Below this is an 'Answers:' section with a text input field containing the number '3' and three buttons: 'Add as Worded Answer', 'Add as Numerical Value', and 'Add as Math'. There is also a large green rectangular area. The 'Options:' section includes a checkbox 'Show students partial correct answers?' with 'Yes' and 'No' radio buttons, where 'No' is selected. The 'Detailed Solution: (Optional)' section has a large yellow text area. At the bottom are 'Back' and 'Create' buttons, with the text 'Fill in the fields to create an open response problem.' in between.



A preview of the generated problem. It shows the text 'Select the correct answer(s) from the choices below.' followed by the question 'What is the result of $\int_1^2 2x \, dx$?'. Below the question are four radio button options: 'A. -1', 'B. 1', 'C. 2', and 'D. 3'.