

Moodle on Android

Polat Olu

Abstract

Mobile telephones are used much more than telephone calls, hence the term “mobile device.” The advent of the Java engine in mobile phone technology has enabled manufacturers and software developers to provide an array of applications that rival the laptop computer. Expanded capabilities have led to operating systems such as Android, which serve as platforms for thousands of applications. Among the many uses for mobile devices is m-learning. The software development company Idea eLearning Solutions has adapted Moodle for use on the Android system. Moodle enables teachers to develop and distribute course materials. Using Moodle on Android, students can access course materials from anywhere at any time. They can take quizzes, communicate with peers, submit coursework when they are ready, and get immediate feedback. Further information about this technology can be obtained from www.ideaelearning.net.

Keywords: Mobile learning, Android, Moodle.

Introduction

Mobile devices have become indispensable. We receive calls, make calls, transmit text, play games, browse the Internet, and read e-mail messages using mobile phones. We can do a day’s work from a single phone without ever going to the office. Meanwhile, the term “mobile phone” has been changed to “mobile device” because it performs many other functions in addition to being a telephone. Applications for mobile devices can perform operations that formerly required a laptop or a desktop computer. Many people nowadays do not carry their laptops on business trips because they can manage quite well with one ultra-light pocket-size device.

Thousands of applications have been developed for mobile devices, one of which is e-learning. E-learning through a mobile device is called “m-learning.” This paper starts with a brief history of mobile devices and then discusses an m-learning solution developed by Idea eLearning Solutions.

History of Mobile Devices

Mobile phones have been around for more than a decade. They were first used to make voice calls and to send and receive text messages. Subsequently, manufacturers developed applications for the mobile phone to meet the needs and wishes of eager buyers.

First on the wish-list was the capability to play games. Most readers will remember the “Snake” game on Nokia phones (see Figure 1). People avidly played this game, which was a harbinger of the future of mobile phones. Many people bought Nokia models just for the games. As the demand for more applications continued, manufacturers had to produce more powerful phones with larger screens. Adoption of the Java engine into mobile phone technology made mobile phones available to third party developers, but they still had to make specific software adaptations for use on specific devices.

Polat Olu, E-learning Software designer, polat.olu@idealearning.net



Figure 1. A Nokia phone with a snake game

Today mobile device manufacturers can provide industry-standard software that makes all Java applications compatible with their models, an expansion of capabilities that has led to the mobile operating system. Thus we have operating systems such as Windows Mobile, Android, iOS (previously Mac OS X Lite), and BlackBerry OS, and along with the operating system software we have much enhanced hardware. Mobile devices with enlarged touch screens serve many purposes, among which making a telephone call is only one.

Awareness of the past and a sense of the future have prompted Idea eLearning Solutions to develop an m-learning application for mobile devices. Learning by mobile phone can be highly efficient. Learners can have their learning devices always with them, in a pocket or a handbag. They can access the content for learning whenever and wherever they need to.

Moodle

Moodle is a software platform for storing course data and sharing information with students. Using Moodle, teachers can assign lessons and quizzes and keep track of student progress.

Our application for mobile devices is native to the Android operating system. It provides access to the Moodle platform and enables users to receive lessons and other course information, take quizzes, read, keep a calendar, and search for and review blog posts. Using Moodle, students can communicate with peers and post messages on forums.

Moodle on Android

One starts the Android application by tapping on the application icon to log directly on to Moodle. Initially, one must enter a username, password, and a Moodle

address, which is the Moodle web address one would otherwise enter into an Internet browser. After creating and entering these items, the user connects to Moodle and downloads Moodle data.

The first screen (see Figure 2) is the main screen. It lists the courses in which the user can enroll or is already enrolled. Tapping on a course name reveals details of the course.

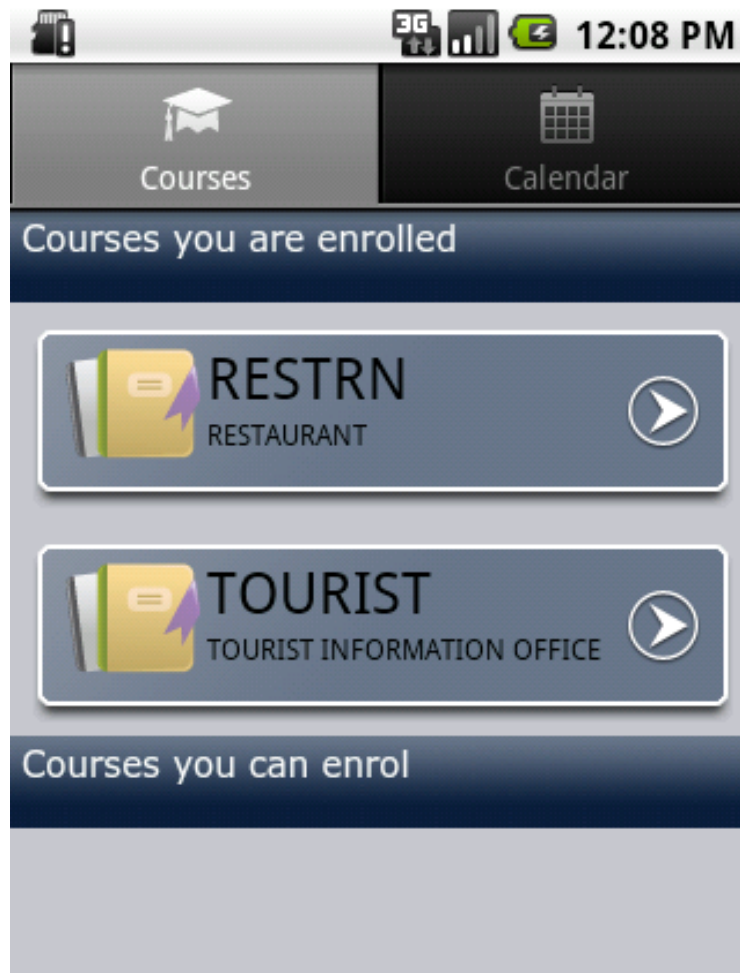


Figure 2. Main screen

On the main screen, students can also view their calendar (see Figure 3) including upcoming events. In the calendar view, reminders may be course specific, site specific, or student specific. They are listed in chronological order, starting from the most immediate. The calendar may be refreshed at any time.



Figure 3. Calendar view

After selecting a current course, a student can see the course topics and the Community and Course Info tabs (see Figure 4). The Topics tab lists the topics of the course that was selected from the previous course list. After selecting a topic, the student will see details related to the topic, such as lessons and quizzes. The Android application synchronizes with Moodle to retrieve topic information and store it on the Android device. Clicking on the Course Info tab reveals a description of the course as formatted on Moodle, complete with rich-text features.

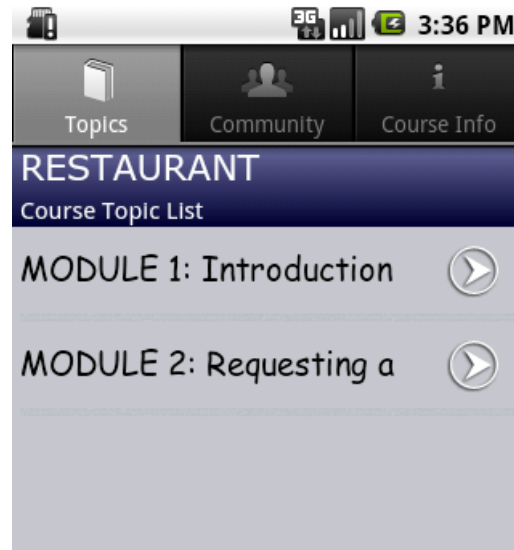


Figure 4. Course topics

The Community tab (see Figure 5) is a meeting point where students can share information, read posts, and send instant messages.

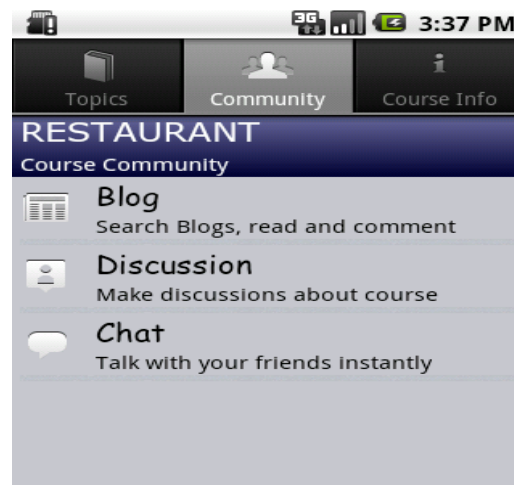


Figure 5. Community tab

In Moodle there is a blog section that enables participants to place information about the course on the Web (see Figure 6). Moodle on Android queries blog entries and brings them to the user's Android device. Blogs are shown as a list of blog titles. Students can search existing blogs with a few keywords, and the Android application will search and list all relevant blogs in Moodle. They are shown in an easy-to-read text format, with smileys where appropriate, and one can jump to the browser function by tapping on a link. Students cannot write new blogs from the Android application, mainly because it is difficult and time consuming to send long messages from a mobile device. Hence blogs can only be read. However, students can write comments for the blog posts (see Figure 7).

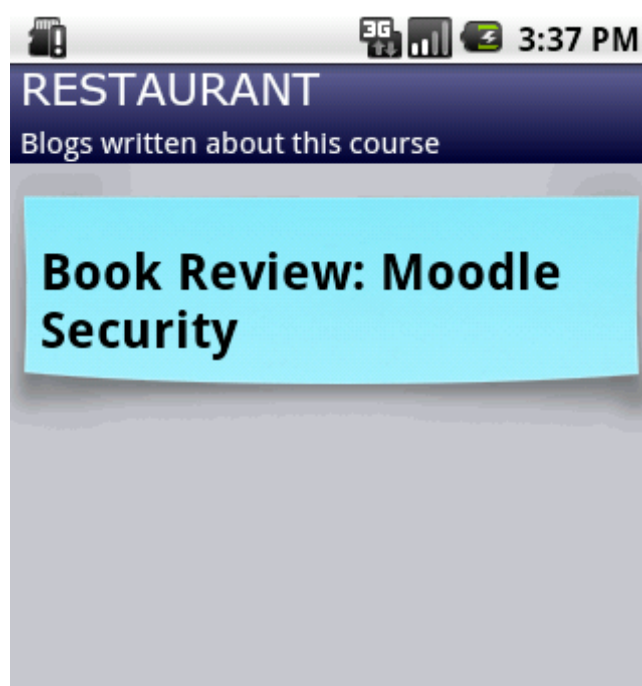
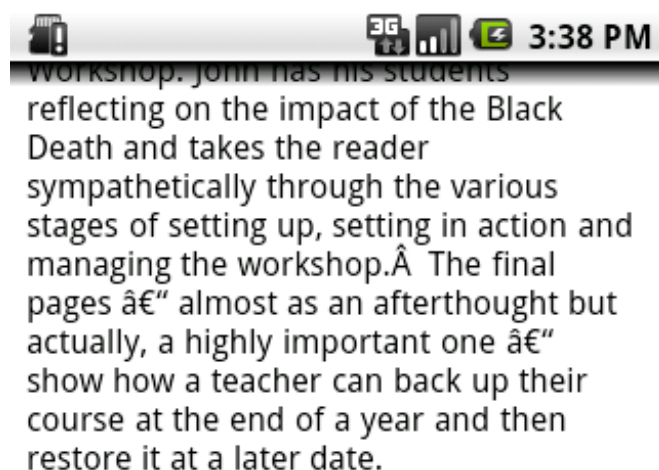


Figure 6. Blogs list

Moodle has a forum feature that enables students to post messages and to reply to posts that have been submitted by other people in the community. This feature, like the blogs, allows students to share ideas, but also permits them to ask questions.

There is also an instant messaging feature. Even when one is “chatting,” one can see online friends and start instant messaging with them.



I would recommend this book to Moodle-using teachers of History at any level and any nationality. It gives you all you need to set up and maintain interesting courses for your students while not drowning you in superfluous technical detail. Well done John!

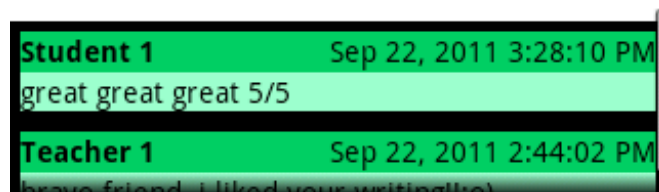


Figure 7. Blog post

Teachers using Moodle develop course content and prepare quizzes. Lesson page content can be as long as Moodle permits, and the Android application displays the content in the best possible way. Using Moodle on Android, students can access all the Lesson Content and Question Pages, which are tailored for the screen of their mobile device. If a lesson page includes audio or visual media, the appropriate controls appear and may be used. The application does not download the media; it streams audio and video files to play on the mobile device (see Figures 8 and 9).

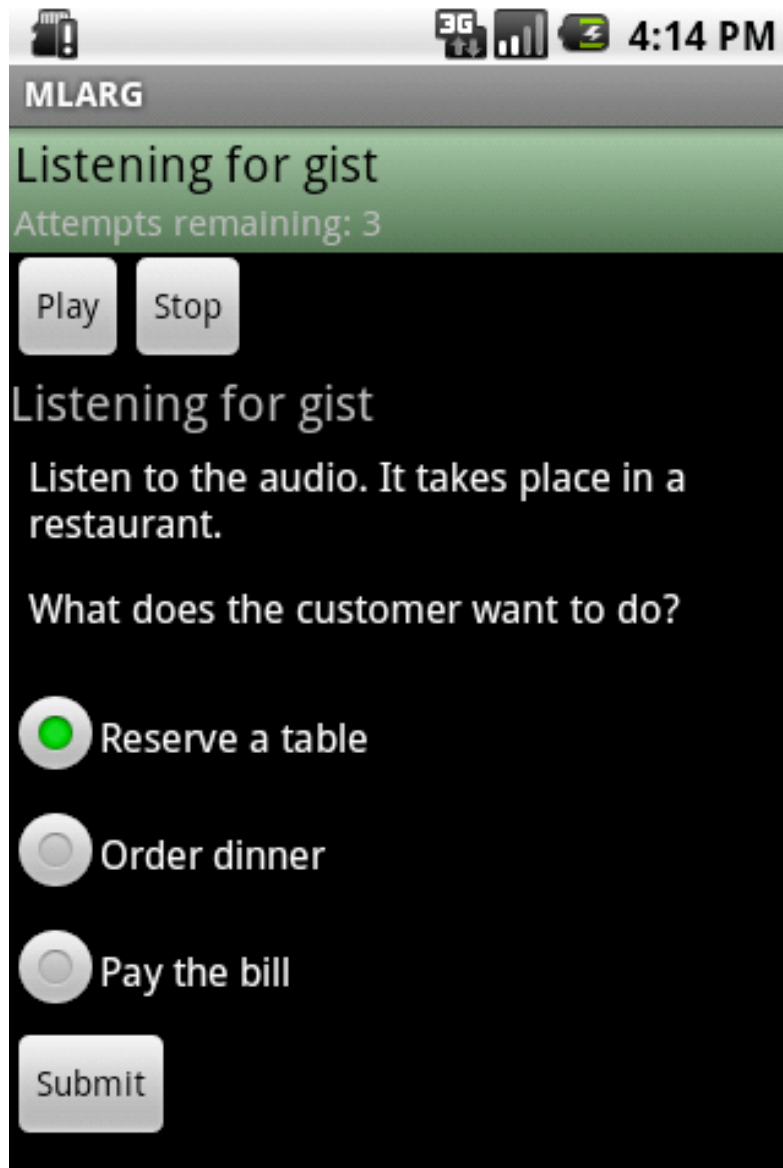


Figure 8. Lesson page audio streaming

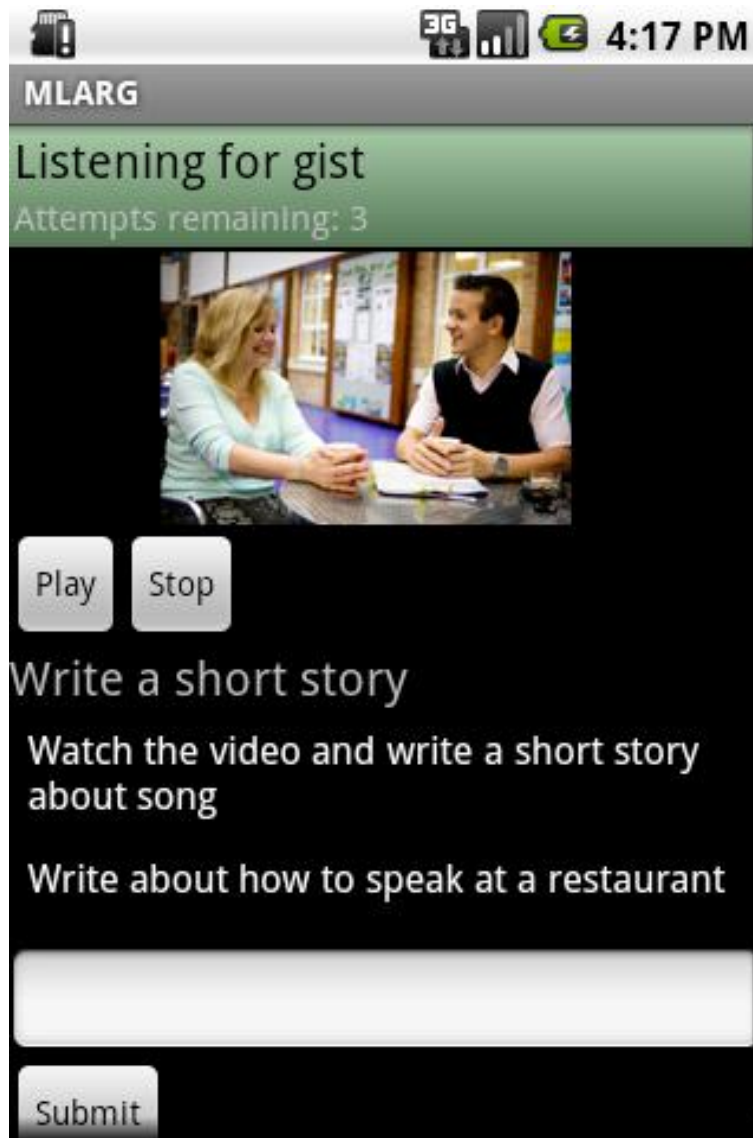


Figure 9. Lesson page video streaming

On Question pages, students see each item and a blank response field for making a multiple-choice selection or for entering text. After responding, they receive immediate feedback (see Figure 10). Their responses are saved on a summary page, and there they can rate their overall success when the course ends. Moodle's "attempt" feature with adjustable setting is also supported.

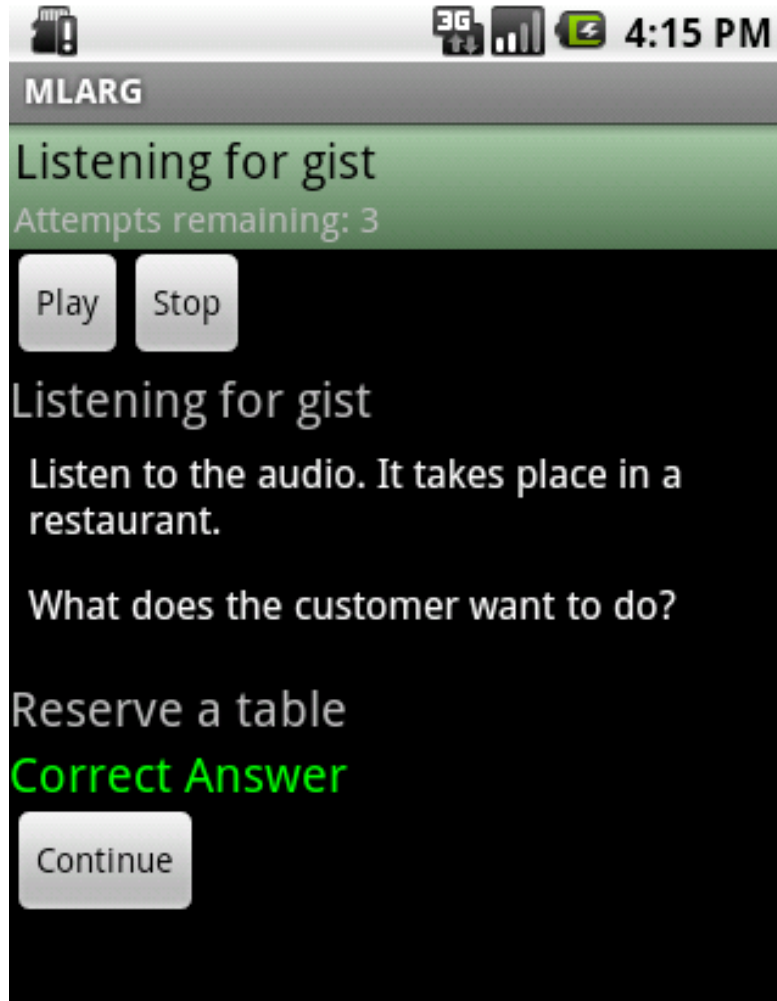


Figure 10. Lesson page immediate feedback

The quiz function allows for most of the question types including text entry, multiple-choice, embedded answer (cloze), and matching. In Figure 11, which shows a matching item, the bar in the title records the progress of the quiz. The item number and the total number of items are shown on the right side of the bar. In this sample, students are cued to respond by tapping the “Tap to answer” button. After tapping, they would see a list of choices from which to select. In Moodle, matching questions may contain sub-items. The item in Figure 11 leads to multiple sub-items. Students can navigate freely through the items and submit the completed quiz when they are ready.

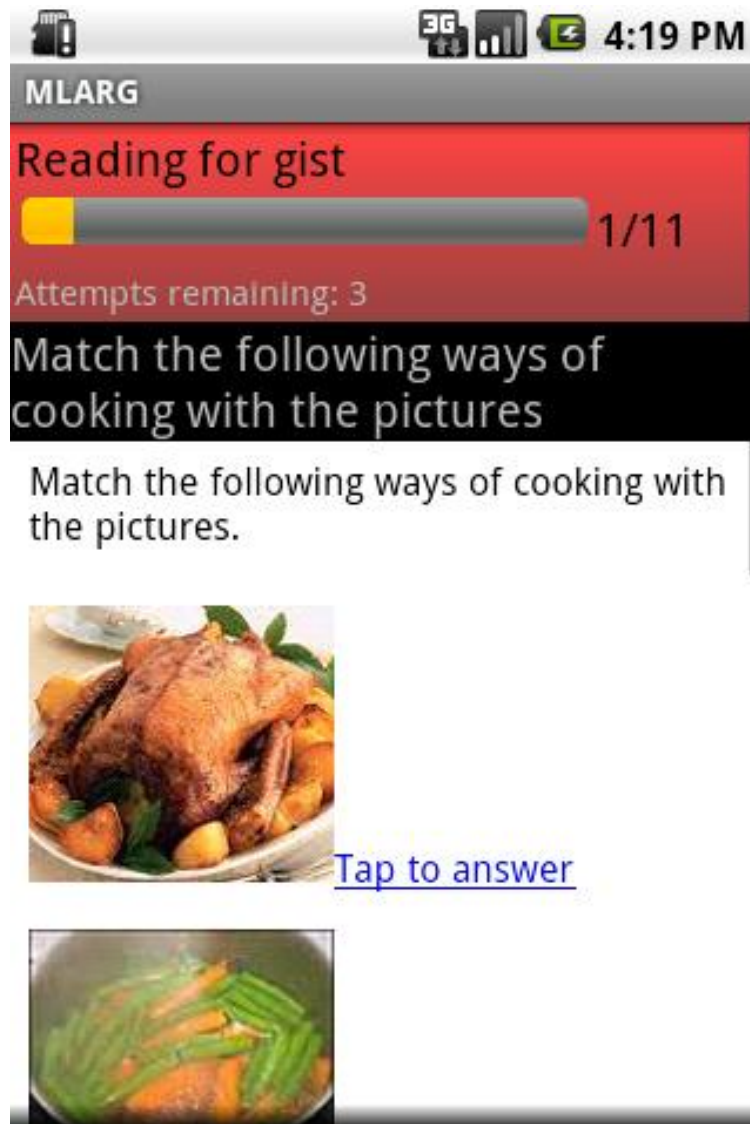


Figure 11. Sample of a matching item

In fill-in-the-blank items (see Figure 12), students see empty spaces in some sentences and are asked to enter the word or words that best complete these sentences. After tapping on an empty space (blue lines in Figure 12), a student sees the options for entry into that space, and after selecting an option, the blue line shows the student's choice (blue text in Figure 12).

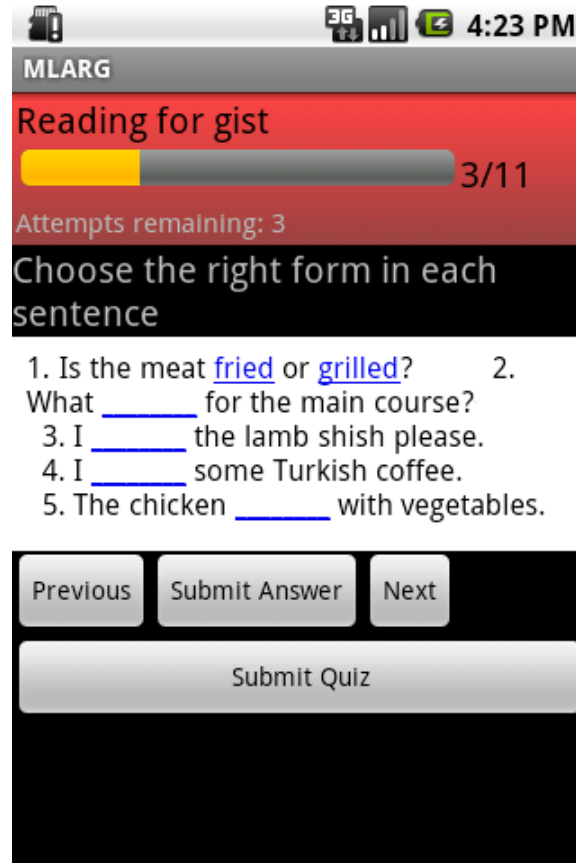


Figure 12. A fill-in-the-blank item

Moodle does the grading. Moodle on Android sends students their grades. Penalties are an interesting Moodle feature. A teacher sets the penalty for an incorrect response to an item (it must be lower than the item's score); then, in consequence of an incorrect response, Moodle reduces the test-taker's score accordingly. In this and other grading features, the rules are set by the teacher; Moodle on Android does not change the rules in any way.

Idea eLearning Solutions

At Idea eLearning Solutions we see no limitations to the use of mobile technology for learning. Further information about our technology can be obtained from www.ideaelearning.net.