

## Pangaea

<b>Function</b>
Publish an article
<b>Description</b>
Allows a writer to write an article, edit it, set title, subtitle, featured image, content tags, add images, and publish the article.
<b>Inputs</b>
A written article. Must have at least 10 words.
<b>Source</b>
The user types in the article. The user can also publish a previously written article draft.
<b>Destination</b>
The article is saved to the database and article marked as published in the database.
<b>Action</b>
The editor allows the user to edit the article, set article title and subtitle, content tags, featured image. When the user clicks publish the article is submitted to the database and marked as published and made accessible by any other eligible user. The article may also be included in regular mails sent to readers.
<b>Requirements</b>
The user must click "Publish" to publish their article.
<b>Pre-condition</b>
The user must have an account.
<b>Post-condition</b>
The article is published and can be viewed by any other user.
<b>Side effects</b>
The article may earn money depending on its reader traffic.

<b>Function</b>
Earning royalty for an article
<b>Description</b>
Writers can earn royalties for the articles they have written based on reader subscription fees.
<b>Inputs</b>
Includes stats on how long each user has read each of the articles he or she has read.
<b>Source</b>
Stats on reading time is recorded as users read articles.
<b>Destination</b>
These stats are stored in the database.
<b>Action</b>
<p>For each user the total number of read hours in a month is computed based on the stats recorded throughout the month. Each article read by a user is awarded a proportionate amount of royalty based on time spent on it. That is:</p> $\$ \text{from user } X \text{ for article } Y \text{ in month } Z = \frac{\text{number of seconds spent reading article } Y \text{ in month } Z}{\text{total number of read hours in month } Z}$ <p>A writer's total monthly royalty is hence determined by the total earnings from each article that month.  Pangaea is a for-profit business so a 2% fee will be deducted from each and every disbursement made.</p>
<b>Requirements</b>
This function can only take place on the 1st of any month of the year.
<b>Pre-condition</b>
An article must have had user traffic from users who have paid the subscription fee.
<b>Post-condition</b>
The amount payable to a writer has been calculated.
<b>Side effects</b>
None.

<b>Function</b>
Registering a user
<b>Description</b>
This function allows users to register their accounts and provide their M-Pesa payment details.
<b>Inputs</b>
The user keys in full name, preferred username, email, M-Pesa number, attaches the profile picture(optional) and selects their topics of interest.
<b>Source</b>
These inputs will be keyed in by the user and obtained from the registration form's submission.
<b>Destination</b>
The forms will submit the form data to the register script which will do the registration.
<b>Action</b>
The register script picks the form data sent to it, validates it and then stores those details to the database.
<b>Requirements</b>
The details keyed in must be validated that erroneous data will not be accepted.
<b>Pre-condition</b>
The user must consent to account creation and click "Register".
<b>Post-condition</b>
The user's account is created and the user is sent an email to verify their email address.
<b>Side effects</b>
None.