

# Schema.org proposal

CreativeWork/SoftwareApplication

Last Updated: December 2011

[1. Schema definition](#)

[2. Example \(Android Market mobile app\)](#)

## Change History

Dec2011

- deprecated dateUpdated (use creativework/dateModified instead)
- moved "countriesSupported", "permissions" from mobile to top level definition.
- applicationCategory accepts Text format
- renamed "VersionChanges" to "releaseNotes"
- renamed "providedFeatures" to "featureList"
- renamed "requiredFeatures" to "requirements"
- added "devices"
- added "storageRequirements", "memoryRequirements", and "processorRequirements"
- added "productSuite"

## Schema definition

### *Existing properties*

#### [Thing](#)

Property	Expected Type	Description
name	Text	Name of the item
description	Text	A short description of the item
image	URL	URL of an image of the item (application logo or icon)
URL	URL	URL of the item

#### [Thing > CreativeWork](#)

Property	Expected Type	Description
author	<a href="#">Person</a> or <a href="#">Organization</a>	The author of the application. The author can be an individual developer or a company.

aggregateRating	<a href="#">AggregateRating</a>	
reviews	<a href="#">Review</a>	reviews of the application
offers	<a href="#">Offer</a>	For Developers, they can indicate which marketplaces carry the application.  For marketplace, indicate the price of the application for a specific app instance.
interactionCount	<a href="#">UserInteraction</a>	A count of specific user interaction with this item - for example: 20 likes, 5 comments, 300 userdownloads. The user interaction type should be one of the subtypes of UserInteraction
contentRating	Text	official rating of the content (e.g. M=mature, etc.)
datePublished	Date	date of first publication
inLanguage	Text	The language of the application, in <a href="#">IETF BCP 47</a> format.
video	<a href="#">VideoObject</a>	link(s) to videos (embedded VideoObject)
dateModified		date on which the CreativeWork was last modified.

### ***New types and properties***

#### **Thing > CreativeWork > SoftwareApplication**

<b>Property</b>	<b>Expected Type</b>	<b>Description</b>
operatingSystems	Text	Operating systems required (“Windows 7”, “OSX 10.6”, “Android 1.6”)
devices	Text	Devices required to run the application. Used in cases where a specific make/model is required to run the application.
fileSize	Text	size of the application / package (18MB). In the absence of a unit (MB, KB etc), KB will be assumed.
fileFormat	Text	MIME format of the binary (e.g. application/zip)

applicationCategory	Text	type of software application. e.g. Game, Multimedia
applicationSubCategory	Text	subcategory of the application “e.g. Arcade Game”
downloadURL	URL	if the file can be downloaded, URL to download the binary
softwareVersion	Text	version of the software instance
releaseNotes	URL or Text	what changed in this version
installURL	URL	URL at which the app may be installed, if different from the URL of the item
requirements	URL or Text	Component dependency requirements for application. This includes runtime environments and shared libraries that are not included in the application distribution package , but required to run the application (Examples: DirectX, Java or .NET runtime).
featureList	URL or Text	features or modules provided by this application.
screenshots	<a href="#">ImageObject</a> or URL	link(s) to app screenshots
storageRequirements	URL or Text	Storage requirements (free space required).
memoryRequirements	Text	Minimum memory requirements
processorRequirements	Text	Processor architecture required to run the application (e.g. IA64)
countriesSupported	Text	countries that allow the application. You can also provide the two-letter ISO 3166-1 alpha-2 country code.
countriesNotSupported	Text	countries that disallow the application. You can also provide the two-letter ISO 3166-1 alpha-2 country code.
permissions	Text	Permission(s) required to run the app (for example, a mobile app may require full internet access or may run only on wifi).

applicationSuite	Text	The name of the application suite to which the application belongs (e.g. Excel > Office)
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### Thing > CreativeWork > SoftwareApplication > MobileApplication

Property	Expected Type	Description
carrierRequirements	Text	Specifies specific carrier(s) requirements for the application (e.g. an application may only work on a specific carrier network).

### Thing > CreativeWork > SoftwareApplication > WebApplication

Property	Expected Type	Description
browsers	Text	Browser requirements. For example, "requires HTML5 support".

### Thing > Intangible > Enumeration > SoftwareApplicationType

- GameApplication (action, arcades, etc)
- EntertainmentApplication (music, sports, TV)
- BusinessApplication (productivity tool, accounting, finance, tax)
- MultimediaApplication (audio/video player, consumer photo/video editor)
- DeveloperApplication (compilers, debuggers)
- DriverApplication (OS drivers)
- EducationalApplication
- HealthApplication
- TravelApplication
- FinanceApplication (accounting, finance, tax)
- SecurityApplication
- BrowserApplication (web browser, RSS reader, browser add-on/plugin)
- CommunicationApplication (email , VOIP application)
- DesktopEnhancementApplication
- DesignApplication (graphic design, pro audio/video, modeling, CAD/CAM)
- HomeApplication (decoration, landscaping, DIY)
- SocialNetworkingApplication
- UtilitiesApplication (system tools, utilities)
- ReferenceApplication (books, reference)

- SportsApplication
- ShoppingApplication
- MedicalApplication
- OtherApplication

## 2. Example #1 (Android Market mobile app)

[https://market.android.com/details?id=com.rovio.angrybirds&feature=search\\_result](https://market.android.com/details?id=com.rovio.angrybirds&feature=search_result)

```
<div itemscope itemtype="http://schema.org/MobileSoftwareApplication">


<span itemprop="name">Angry Birds</span> -
by <a itemprop="author" href="rovio.com">Rovio Mobile Ltd.</a>

<span itemprop = "description">
Use the unique powers of the Angry Birds to destroy the greedy pigs'
fortresses!
The survival of the Angry Birds is at stake. Dish out revenge on the greedy
pigs who stole their eggs. Use the unique powers of each bird to destroy the
pigs' fortresses. Angry Birds features challenging physics-based gameplay
and hours of replay value. Each of the 240 levels requires logic, skill, and
force to solve.
</span>

CONTENT RATING:<span itemprop="contentRating">Everyone</span>
UPDATED: <time itemprop="datePublished" datetime="2011-03-16">March 16,
2011</time>
REQUIRES <span itemprop="operatingSystems">ANDROID 1.6</span>:<span
itemprop="operatingSystemVersion">and up</span>
<link itemprop="softwareApplicationCategory" href="http://schema.org/
GameApplication" />
CATEGORY:<link itemprop="softwareApplicationSubCategory">Arcade & Action</
span>
SIZE: 17M
<meta itemprop="fileSize" content="17825792"/>
INSTALLS:<meta itemprop="interactionCount" content="UserDownloads:10000000"/
>10,000,000 -50,000,000

RATING:
<div itemprop="aggregateRating" itemscope itemtype="http://schema.org/
AggregateRating">
  <span itemprop="ratingValue">4.6</span> (
  <span itemprop="ratingCount">653383</span>)
  <meta itemprop="reviewCount" content="11116" />
</div>

<div itemprop="offers" itemscope itemtype="http://schema.org/Offer">
```

```
Price: <span itemprop="price">$1.00</span>
<meta itemprop="priceCurrency" content="USD" />
<link itemprop="availability" href="http://schema.org/InStock" />INSTALL
<div itemprop="seller" itemscope itemtype="http://schema.org/Organization">
  <span itemprop="name">Rovio</span>
</div>
</div>
```

```
<div itemprop="offers" itemscope itemtype="http://schema.org/Offer">
  Price: <span itemprop="price">$18.95</span>
  <meta itemprop="priceCurrency" content="IRP" />
  <link itemprop="availability" href="http://schema.org/InStock" />INSTALL
  <div itemprop="seller" itemscope itemtype="http://schema.org/Organization">
    <span itemprop="name">Rovio</span>
  </div>
</div>
```

Reviews:

```
<div itemprop="reviews" itemscope itemtype="http://schema.org/Review">
  <span itemprop="reviewRating">1</span> stars -
  <b>"<span itemprop="name">A masterpiece</span>" </b>
  by <span itemprop="author">Kym</span>,
  Written on <time itemprop="publishDate" datetime="2011-06-09">June 9, 2011</
time>
  <span itemprop="reviewBody">Stuck on loading when I open the app.
  Uninstalled.
  </span>
</div>
```

```
<div itemprop="reviews" itemscope itemtype="http://schema.org/Review">
  <span itemprop="reviewRating">4</span> stars -
  <b>"<span itemprop="name">A masterpiece</span>" </b>
  by <span itemprop="author">Ammanda</span>,
  Written on <time itemprop="publishDate" datetime="2011-06-09">June 9, 2011</
time>
  <span itemprop="reviewBody">Luv the game but it always freezez and the game
  so cheats u other than that its verry adicting </span>
</div>
```

```
<div itemprop="reviews" itemscope itemtype="http://schema.org/Review">
  <span itemprop="reviewRating">5</span> stars -
  <b>"<span itemprop="name">A masterpiece</span>" </b>
  by <span itemprop="author">hoiscocoaches</span>,
  Written on <time itemprop="publishDate" datetime="2011-06-09">June 9, 2011</
time>
  <span itemprop="reviewBody">Luv the game but it always freezez and the game
  so cheats u other than that its verry adicting </span>
</div>
```

THIS APPLICATION HAS ACCESS TO THE FOLLOWING:

```
<span itemprop="requiredFeatures">NETWORK COMMUNICATION</span>
<span itemprop="requiredFeatures">FULL INTERNET ACCESS</span>
<span itemprop="requiredFeatures">Allows an application to create network
sockets.</span>
```

