WB LAB-6
ADITYA AGARWAL
ROLL NO. 14
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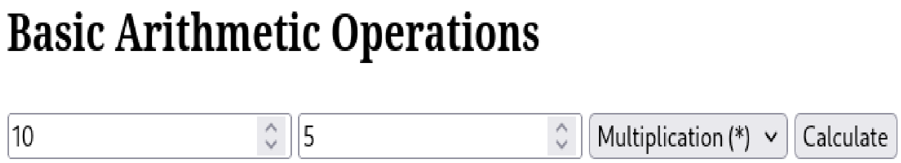
1.Develop a simple web page to perform basic arithmetic operations. Take two
integer inputs from the user, select the operation to be performed using a
dropdown. Include a button “Calculate” to perform the selected operation, and
then display the result in the same web page.



Basic Arithmetic Operations

10 5 Multiplication (*)

urls.py

```
from django.urls import path
from . import views
```

```
urlpatterns = [
    path('', views.calculator_view, name='calculator'),
]
```

views.py

```
from django.shortcuts import render

def calculator_view(request):
    result = None
    if request.method == 'POST':
    try:
        num1 = int(request.POST.get('num1', 0))
        num2 = int(request.POST.get('num2', 0))
        operation = request.POST.get('operation')

        if operation == 'add':
        result = num1 + num2
        elif operation == 'subtract':
        result = num1 - num2
        elif operation == 'multiply':
        result = num1 * num2
        elif operation == 'divide':
        if num2 != 0:
            result = num1 / num2
        else:
            result = "Cannot divide by zero"
    except ValueError:
        result = "Please enter valid numbers"
    return render(request, 'calculator/calculator.html', {'result': result})
```

Calculator.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Basic Calculator</title>
    <style>
    body {
        font-family: Arial, sans-serif;
        max-width: 600px;
        margin: 50px auto;
        padding: 20px;
    }
    .calculator-form {
        background-color: #f5f5f5;
        padding: 20px;
        border-radius: 8px;
        box-shadow: 0 2px 4px rgba(0,0,0,0.1);
    }
    .form-group {
        margin-bottom: 15px;
```

```
}
label {
        display: block;
        margin-bottom: 5px;
        font-weight: bold;
}
input[type="number"], select {
        width: 100%;
        padding: 8px;
        border: 1px solid #ddd;
        border-radius: 4px;
        box-sizing: border-box;
}
button {
        background-color: #4CAF50;
        color: white;
        padding: 10px 20px;
        border: none;
        border-radius: 4px;
        cursor: pointer;
        width: 100%;
}
button:hover {
        background-color: #45a049;
}
.result {
        margin-top: 20px;
        padding: 15px;
        background-color: #e9f7ef;
        border-radius: 4px;
        text-align: center;
        font-size: 18px;
    }
    </style>
</head>
<body>
    <div class="calculator-form">
    <h2 style="text-align: center;">Basic Calculator</h2>
    <form method="post">
        {% csrf_token %}
        <div class="form-group">
        <label for="num1">First Number:</label>
        <input type="number" id="num1" name="num1"
required>
        </div>

        <div class="form-group">
        <label for="num2">Second Number:</label>
        <input type="number" id="num2" name="num2"
required>
        </div>

        <div class="form-group">
        <label for="operation">Operation:</label>
        <select id="operation" name="operation" required>
            <option value="add">Addition (+)</option>
            <option value="subtract">Subtraction
(-)</option>
            <option value="multiply">Multiplication
(×)</option>
            <option value="divide">Division (÷)</option>
        </select>
        </div>

        <button type="submit">Calculate</button>
    </form>

    {% if result is not None %}
    <div class="result">
        Result: {{ result }}
    </div>
    {% endif %}
    </div>
</body>
</html>
```

manage.py

```
#!/usr/bin/env python
"""Django's command-line utility for administrative tasks."""
import os
import sys
```

```
def main():
    """Run administrative tasks."""
    os.environ.setdefault('DJANGO_SETTINGS_MODULE',
'lab6.settings')
    try:
    from django.core.management import
execute_from_command_line
    except ImportError as exc:
    raise ImportError(
        "Couldn't import Django. Are you sure it's installed
and "
        "available on your PYTHONPATH environment
variable? Did you "
        "forget to activate a virtual environment?"
    ) from exc
    execute_from_command_line(sys.argv)


if __name__ == '__main__':
    main()
```

settings.py

```
from pathlib import Path
import os

BASE_DIR = Path(__file__).resolve().parent.parent
```

```
SECRET_KEY = 'django-insecure-your-secret-key'

DEBUG = True

ALLOWED_HOSTS = []

INSTALLED_APPS = [
    'django.contrib.admin',
    'django.contrib.auth',
    'django.contrib.contenttypes',
    'django.contrib.sessions',
    'django.contrib.messages',
    'django.contrib.staticfiles',
    'calculator',
    'magazine',
]

MIDDLEWARE = [
    'django.middleware.security.SecurityMiddleware',
    'django.contrib.sessions.middleware.SessionMiddleware',
    'django.middleware.common.CommonMiddleware',
    'django.middleware.csrf.CsrfViewMiddleware',
    'django.contrib.auth.middleware.AuthenticationMiddleware',
    'django.contrib.messages.middleware.MessageMiddleware',
    'django.middleware.clickjacking.XFrameOptionsMiddlew
are',
]

ROOT_URLCONF = 'lab6.urls'

TEMPLATES = [
    {
    'BACKEND':
'django.template.backends.django.DjangoTemplates',
    'DIRS': [],
    'APP_DIRS': True,
    'OPTIONS': {
        'context_processors': [
        'django.template.context_processors.debug',
        'django.template.context_processors.request',
        'django.contrib.auth.context_processors.auth',

    'django.contrib.messages.context_processors.messages'
,
        ],
    },
    },
]

WSGI_APPLICATION = 'lab6.wsgi.application'

DATABASES = {
    'default': {
    'ENGINE': 'django.db.backends.sqlite3',
    'NAME': BASE_DIR / 'db.sqlite3',
    }
}

AUTH_PASSWORD_VALIDATORS = [
    {
    'NAME':
'django.contrib.auth.password_validation.UserAttributeSimilarityValidator',
    },
    {
    'NAME':
'django.contrib.auth.password_validation.MinimumLengthValidator',
    },
    {
    'NAME':
'django.contrib.auth.password_validation.CommonPasswordValidator',
    },
    {
    'NAME':
'django.contrib.auth.password_validation.NumericPasswordValidator',
    },
]
```

```
LANGUAGE_CODE = 'en-us'

TIME_ZONE = 'UTC'

USE_I18N = True

USE_TZ = True

STATIC_URL = 'static/'
STATICFILES_DIRS = [os.path.join(BASE_DIR, 'static')]

DEFAULT_AUTO_FIELD = 'django.db.models.BigAutoField'
```

lab6/urls.py

```
from django.contrib import admin
from django.urls import path, include

urlpatterns = [
	path('admin/', admin.site.urls),
	path('calculator/', include('calculator.urls')),
	path('magazine/', include('magazine.urls')),
]
```

2.Develop a simple web form that generates the front cover for a magazine. The

form should provide the options for selecting the image, background color,
changing font size, color etc. Input messages must be taken from the user so
as to display it on the front cover with legible font family and font size. The
front cover developed should be proportionate to the web page size. Place the
css files inside static folder.

Magazine.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width,
initial-scale=1.0">
    <title>Magazine Cover Generator</title>
    {% load static %}
    <link rel="stylesheet" href="{% static
'magazine/css/style.css' %}">
</head>
<body>
    <div class="magazine-container">
    <div class="magazine-form">
        <h2 style="text-align: center;">Magazine Cover
Generator</h2>
```

```
        <form method="post">
        {% csrf_token %}
        <div class="form-group">
            <label for="text">Magazine Text:</label>
            <input type="text" id="text" name="text"
value="{{ text|default:'' }}" required>
        </div>

        <div class="form-group">
            <label for="image_url">Image URL:</label>
            <input type="url" id="image_url"
name="image_url" value="{{ image_url|default:'' }}" required

    placeholder="https://example.com/image.jpg">
        </div>

        <div class="form-group">
            <label for="font_size">Font Size (px):</label>
            <input type="number" id="font_size"
name="font_size" value="{{ font_size|default:'48' }}"
                min="12" max="72">
        </div>

        <div class="form-group">
            <label for="font_family">Font Family:</label>
            <select id="font_family" name="font_family">
            <option value="Arial" {% if font_family ==
'Arial' %}selected{% endif %}>Arial</option>
```

```
            <option value="Times New Roman" {% if
font_family == 'Times New Roman' %}selected{%
endif %}>Times New Roman</option>
            <option value="Georgia" {% if font_family ==
'Georgia' %}selected{% endif %}>Georgia</option>
            <option value="Verdana" {% if font_family ==
'Verdana' %}selected{% endif %}>Verdana</option>
            <option value="Impact" {% if font_family ==
'Impact' %}selected{% endif %}>Impact</option>
            </select>
        </div>

        <div class="form-group">
            <label for="font_color">Font Color:</label>
            <input type="color" id="font_color"
name="font_color" value="{{ font_color|default:'#000000' }}">
        </div>

        <div class="form-group">
            <label for="bg_color">Background
Color:</label>
            <input type="color" id="bg_color"
name="bg_color" value="{{ bg_color|default:'#ffffff' }}">
        </div>

        <button type="submit">Generate Cover</button>
        </form>
    </div>
    {% if submitted %}
    <div class="magazine-cover" style="background-color:
{{ bg_color }};">
        {% if image_url %}
        <img src="{{ image_url }}" alt="Magazine Cover"
class="magazine-image">
        {% endif %}
        <div class="preview-text" style="
        font-family: '{{ font_family }}', sans-serif;
        font-size: {{ font_size }}px;
        color: {{ font_color }};
        text-shadow: 2px 2px 4px rgba(0,0,0,0.5);">
        {{ text }}
        </div>
    </div>
    {% endif %}
    </div>
</body>
</html>
```

urls.py

```
from django.urls import path
from . import views

urlpatterns = [
    path('', views.magazine_view, name='magazine'),
]
```

views.py

```
from django.shortcuts import render

def magazine_view(request):
    context = {}
    if request.method == 'POST':
    context = {
        'text': request.POST.get('text', ''),
        'font_size': request.POST.get('font_size', '48'),
        'font_family': request.POST.get('font_family', 'Arial'),
        'font_color': request.POST.get('font_color',
'#000000'),
        'bg_color': request.POST.get('bg_color', '#ffffff'),
        'image_url': request.POST.get('image_url', ''),
        'submitted': True
    }
    return render(request, 'magazine/magazine.html',
context)
```

settings.py

```
from pathlib import Path
import os

BASE_DIR = Path(__file__).resolve().parent.parent
```

```
SECRET_KEY = 'django-insecure-your-secret-key'

DEBUG = True

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    'APP_DIRS': True,
    'OPTIONS': {
        'context_processors': [
        'django.template.context_processors.debug',
        'django.template.context_processors.request',
        'django.contrib.auth.context_processors.auth',

    'django.contrib.messages.context_processors.messages'
,
        ],
    },
    },
]

WSGI_APPLICATION = 'lab6.wsgi.application'

DATABASES = {
    'default': {
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    'NAME': BASE_DIR / 'db.sqlite3',
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'django.contrib.auth.password_validation.UserAttributeSimilarityValidator',
    },
    {
    'NAME':
'django.contrib.auth.password_validation.MinimumLengthValidator',
    },
    {
    'NAME':
'django.contrib.auth.password_validation.CommonPasswordValidator',
    },
    {
    'NAME':
'django.contrib.auth.password_validation.NumericPasswordValidator',
    },
]
```
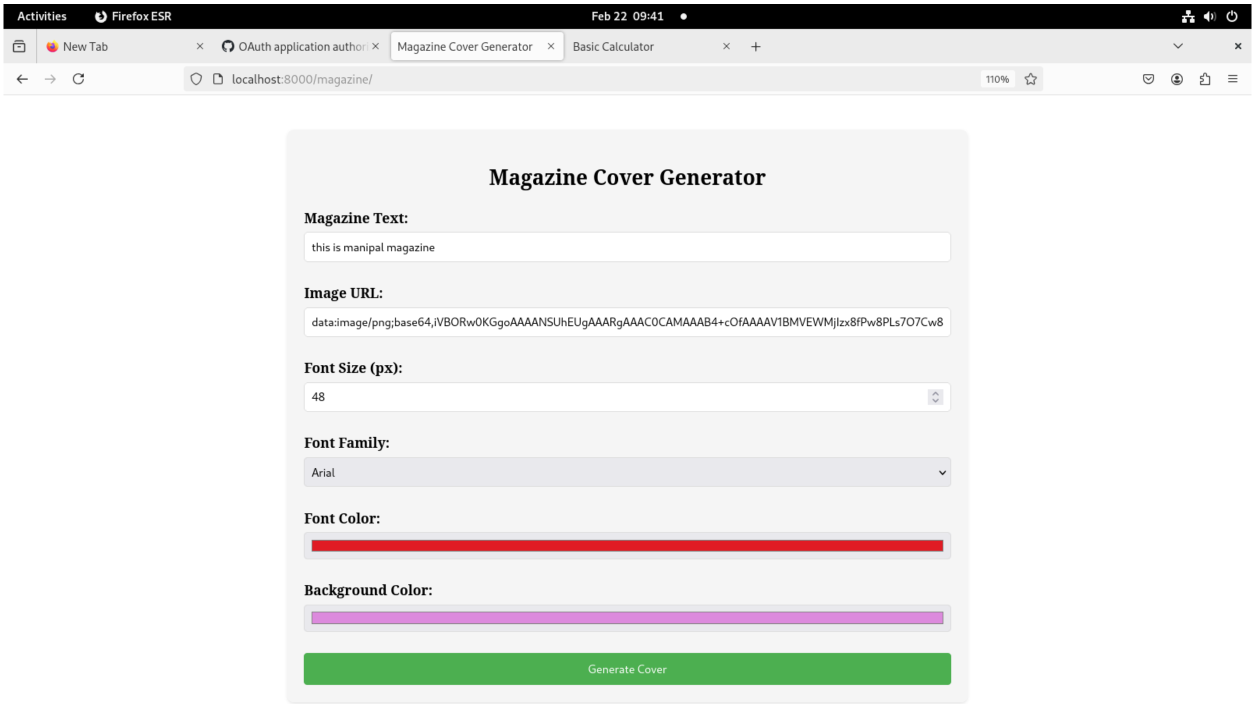

```
LANGUAGE_CODE = 'en-us'

TIME_ZONE = 'UTC'

USE_I18N = True

USE_TZ = True

STATIC_URL = 'static/'
STATICFILES_DIRS = [os.path.join(BASE_DIR, 'static')]

DEFAULT_AUTO_FIELD = 'django.db.models.BigAutoField'
```

lab6/urls.py

```
from django.contrib import admin
from django.urls import path, include

urlpatterns = [
    path('admin/', admin.site.urls),
    path('calculator/', include('calculator.urls')),
    path('magazine/', include('magazine.urls')),
]
```



Magazine Cover Generator

Magazine Text:
this is manipal magazine

Image URL:
data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAARgAAAC0CAMAAAB4+cOfAAAAV1BMVEWMjIzx8fPw8PLs7O7Cw8

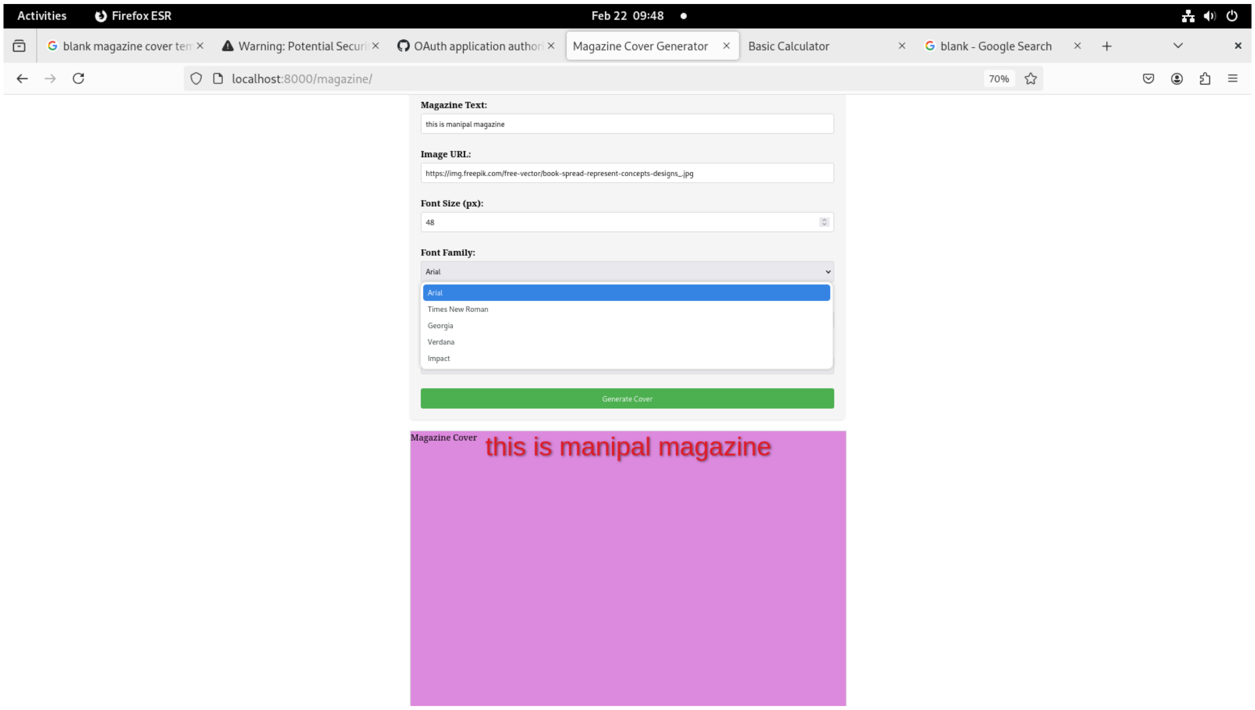
Font Size (px):
48

Font Family:
Arial

Font Color:
🟥

Background Color:
🟪

Generate Cover



Magazine Text:
this is manipal magazine

Image URL:
https://img.freepik.com/free-vector/book-spread-represent-concepts-designs_.jpg

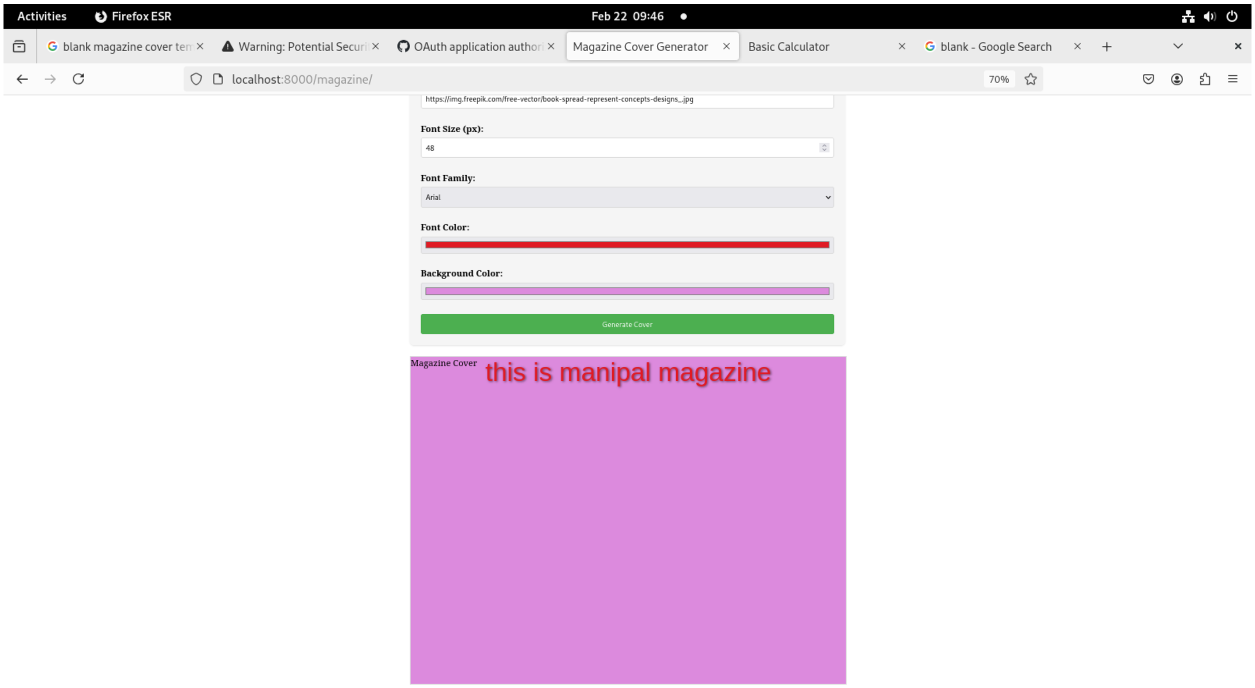
Font Size (px):
48

Font Family:
Arial

- Arial
- Times New Roman
- Georgia
- Verdana
- Impact

Generate Cover

Magazine Cover this is manipal magazine



https://img.freepik.com/free-vector/book-spread-represent-concepts-designs_.jpg

Font Size (px): 48

Font Family: Arial

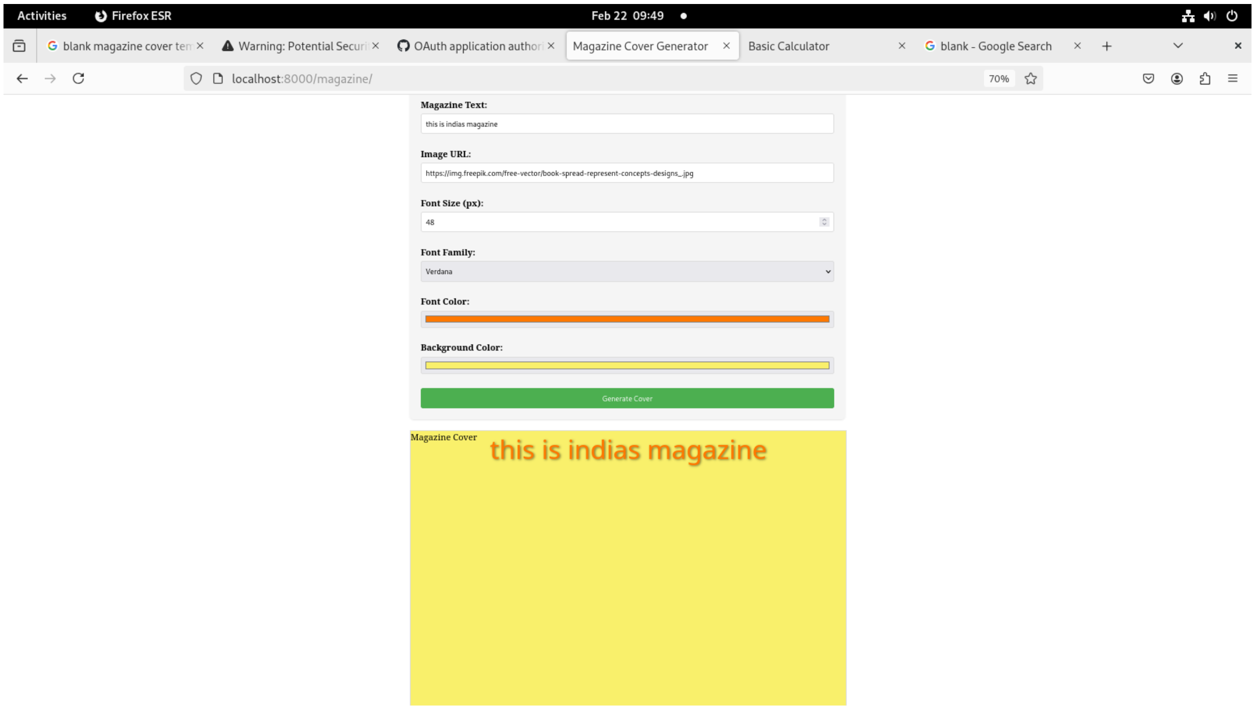
Font Color:

Background Color:

Generate Cover

Magazine Cover

this is manipal magazine



Magazine Text: this is indias magazine

Image URL: https://img.freepik.com/free-vector/book-spread-represent-concepts-designs_.jpg

Font Size (px): 48

Font Family: Verdana

Font Color:

Background Color:

Generate Cover

Magazine Cover

this is indias magazine