

A background image showing two people in a professional setting. A woman in the foreground is smiling and looking towards the left, while a man is partially visible behind her, looking at a document. The image is overlaid with a dark teal filter.

# UNREAL ENGINE

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## PLAYFAB

*Login Tutorial*



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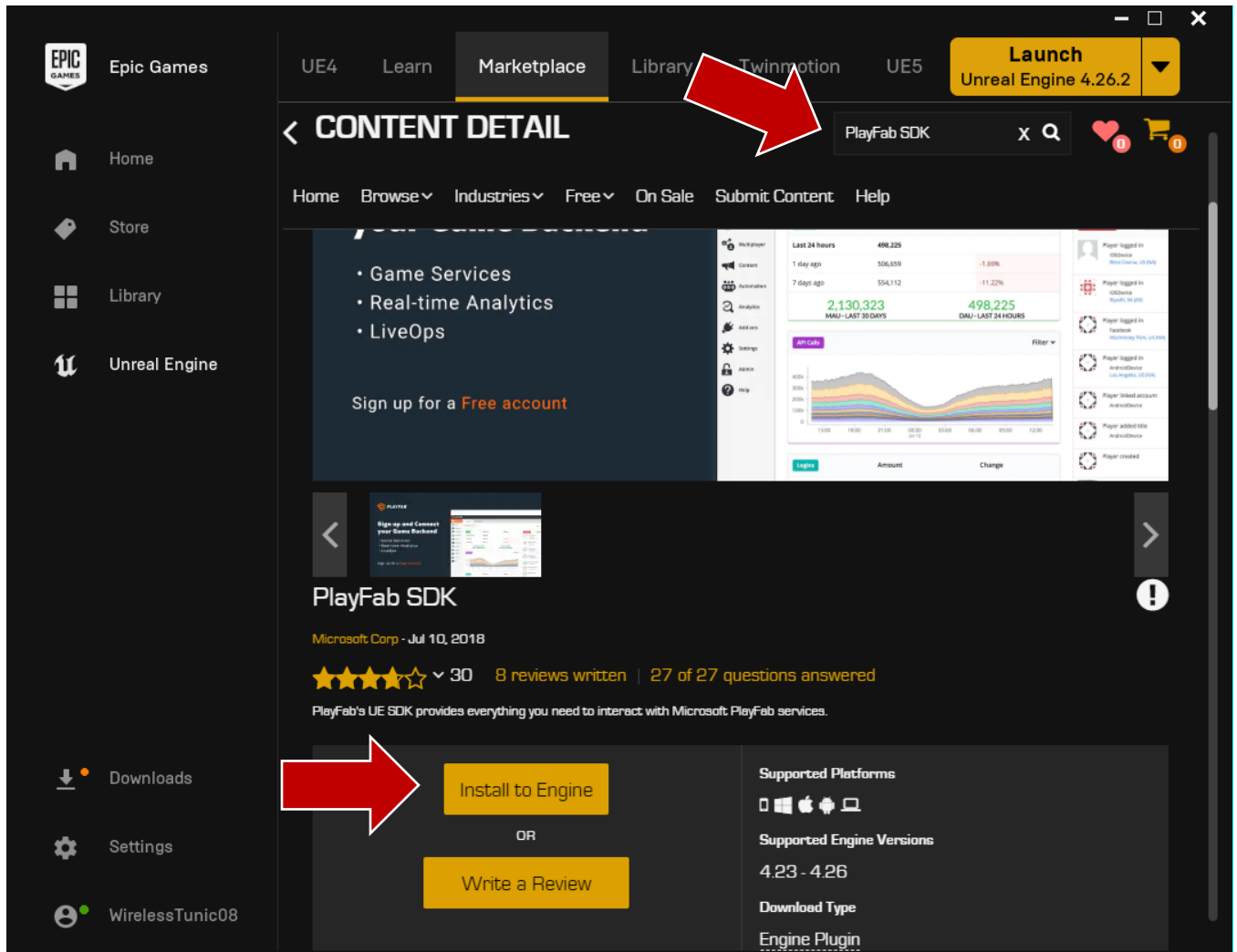
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**This whole tutorial should take around 50 mins. Feel free to use your own ui assets as will not be adding any cosmetic features to my ui**

## INSTALLING THE SKD

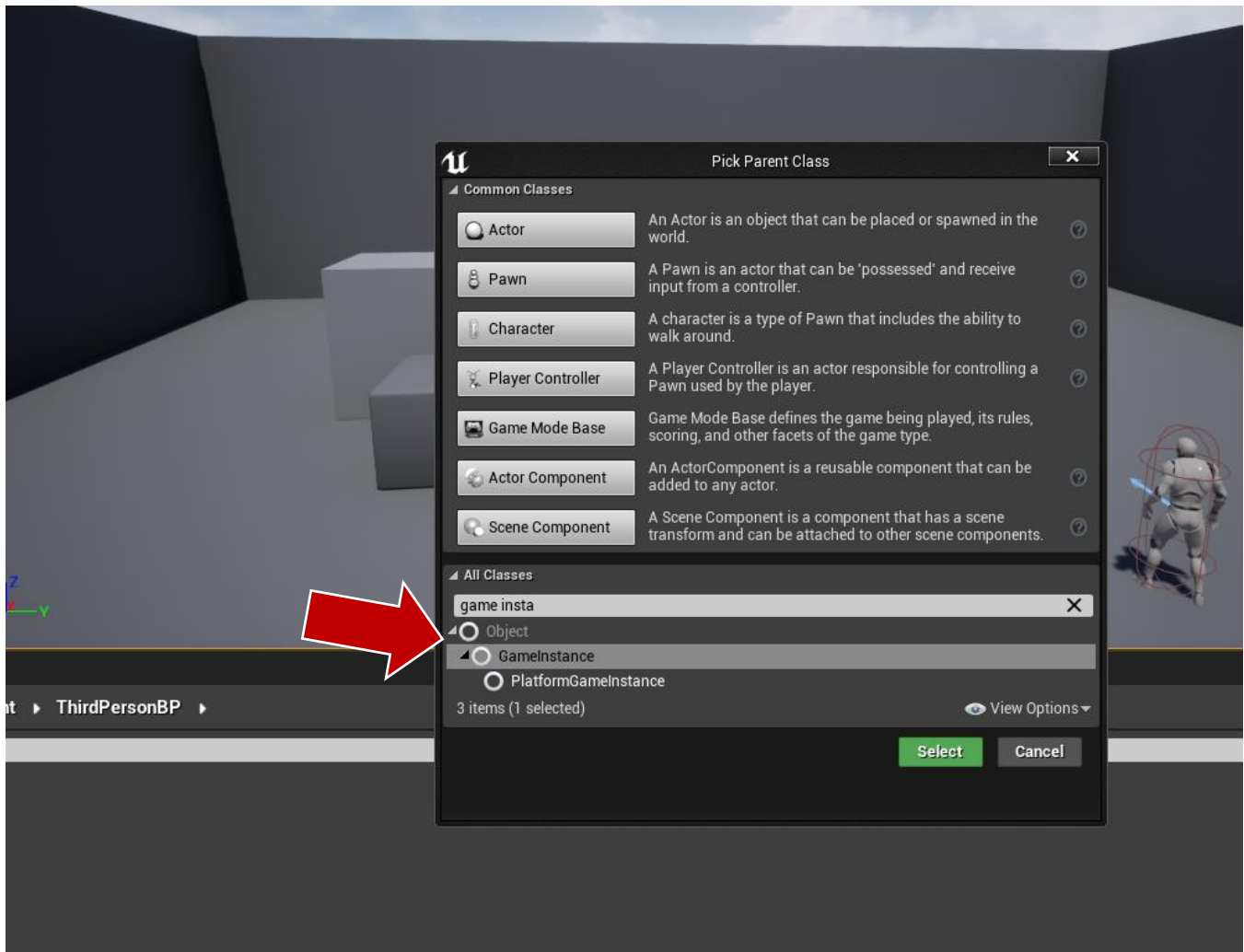
- Firstly, head over to the “Epic Launcher” and navigate to the unreal section.
- In the marketplace search up “PlayFab” and once you find it click install to engine if you already have Unreal open you will need to restart it for it to take effect.



- Great the first step is complete if you haven't already open unreal again so we can continue to the next step

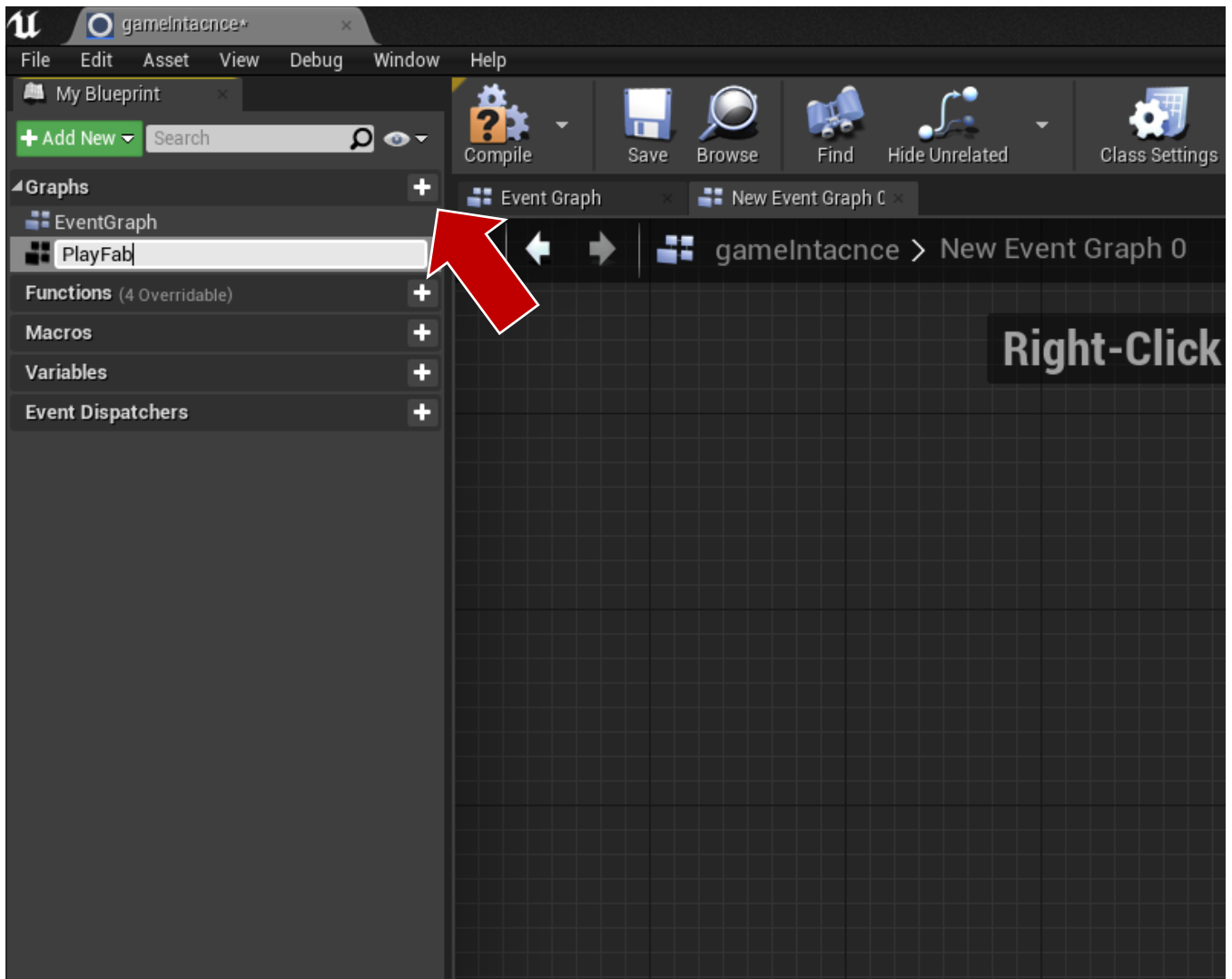
# LINKING PLAYFAB WITH YOUR PROJECT

- Now that that's out of the way we need to create a game instance where all our blueprints will be written in. Right click in the content browser and create a blueprint class then in "All classes" search "GameInstance" and select it to create a new one. Name it whatever you want, its your game Afterall. Just remember the name because it will be used a lot.



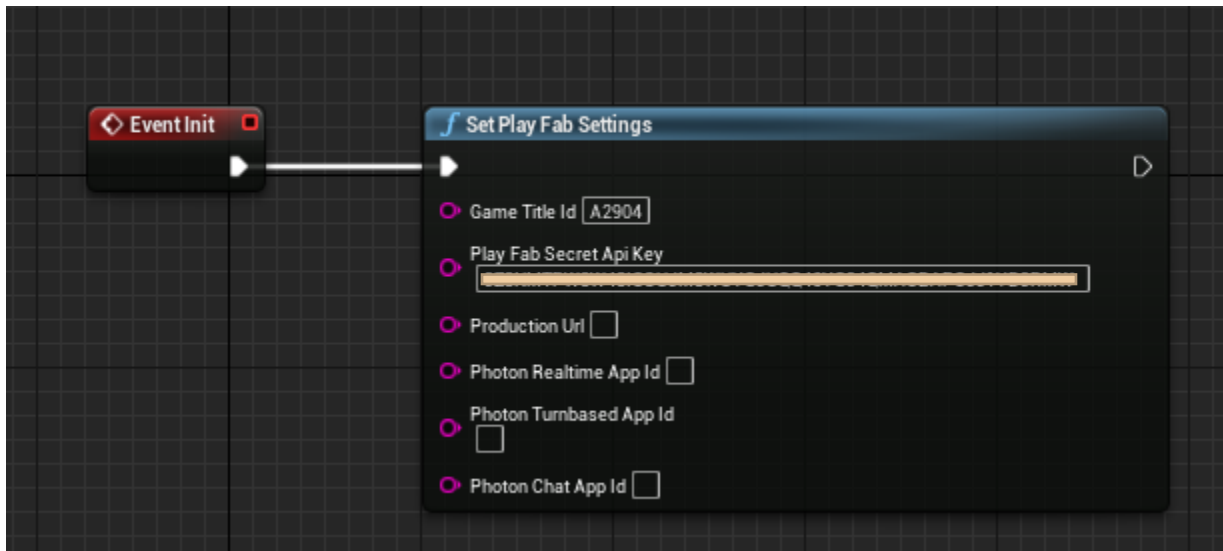
- Inside of the of your new game instance look to the right you should see something that says "Graphs" click the little plus to make a new one and name it PlayFab. This is where all the Blueprints for PlayFab related things will be held.

## Part 2

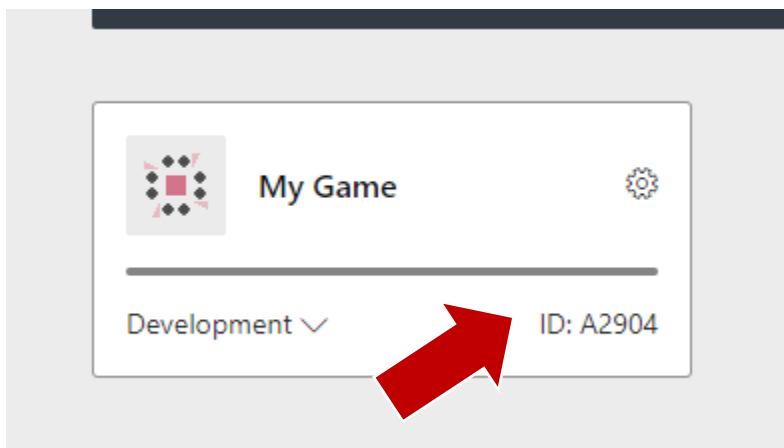


- Within our new graph we want to link unreal with PlayFab. To do so right click and create a “Event Init” then off of that link it to “set PlayFab Settings”. If you installed the SKD correctly you should be able to find it. Your Blueprint should look something like this. I’m assuming you have already made a [PlayFab account](#) if not you will need one.

## Part 2

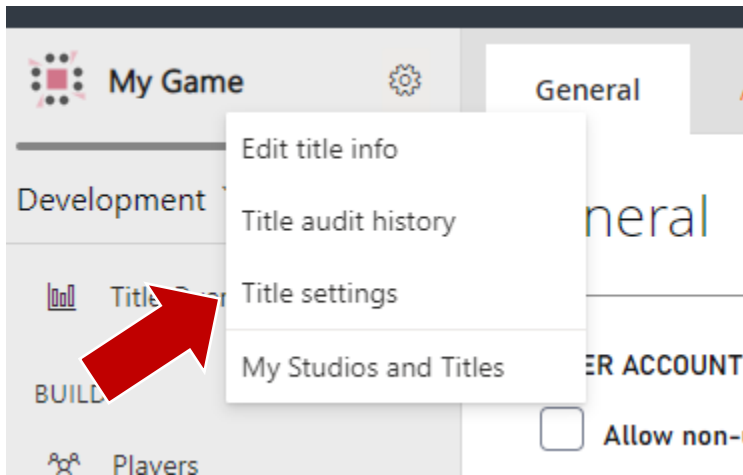


- You will need two codes the “Game ID” and the “PlayFab Secret API key” Make sure you do not share this key with anyone otherwise they will have access to your game. Now you may ask where do I find these keys and id’s? No worries to find the go to the home screen of play fab and it should be there under the title of your game

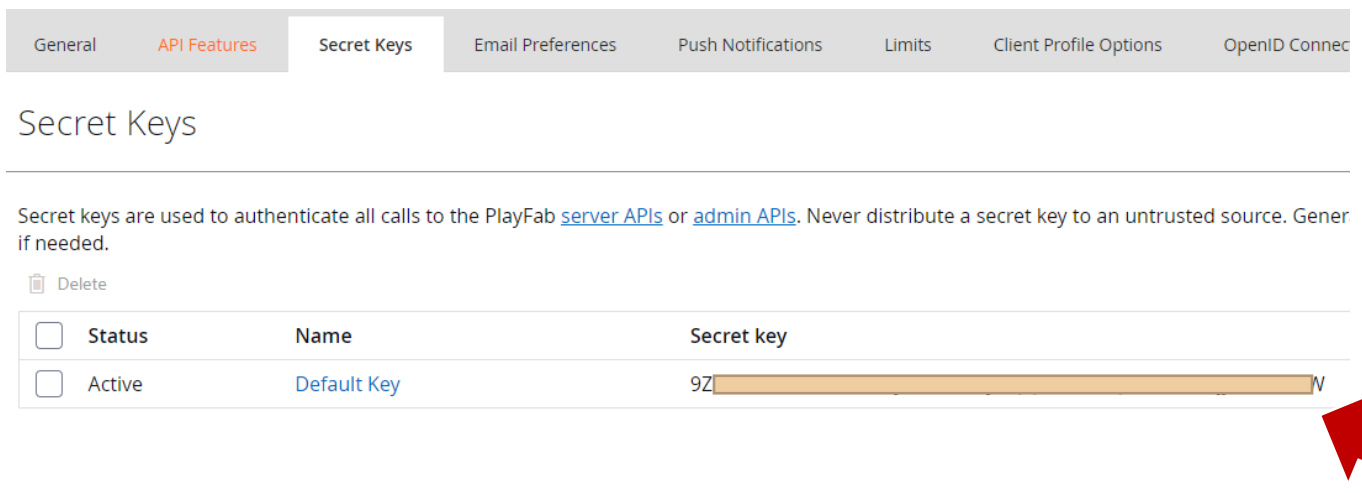


- Now to find the Secret Key you need to click on your game then on the top left there should be a gear click the gear then select title settings

## Part 2



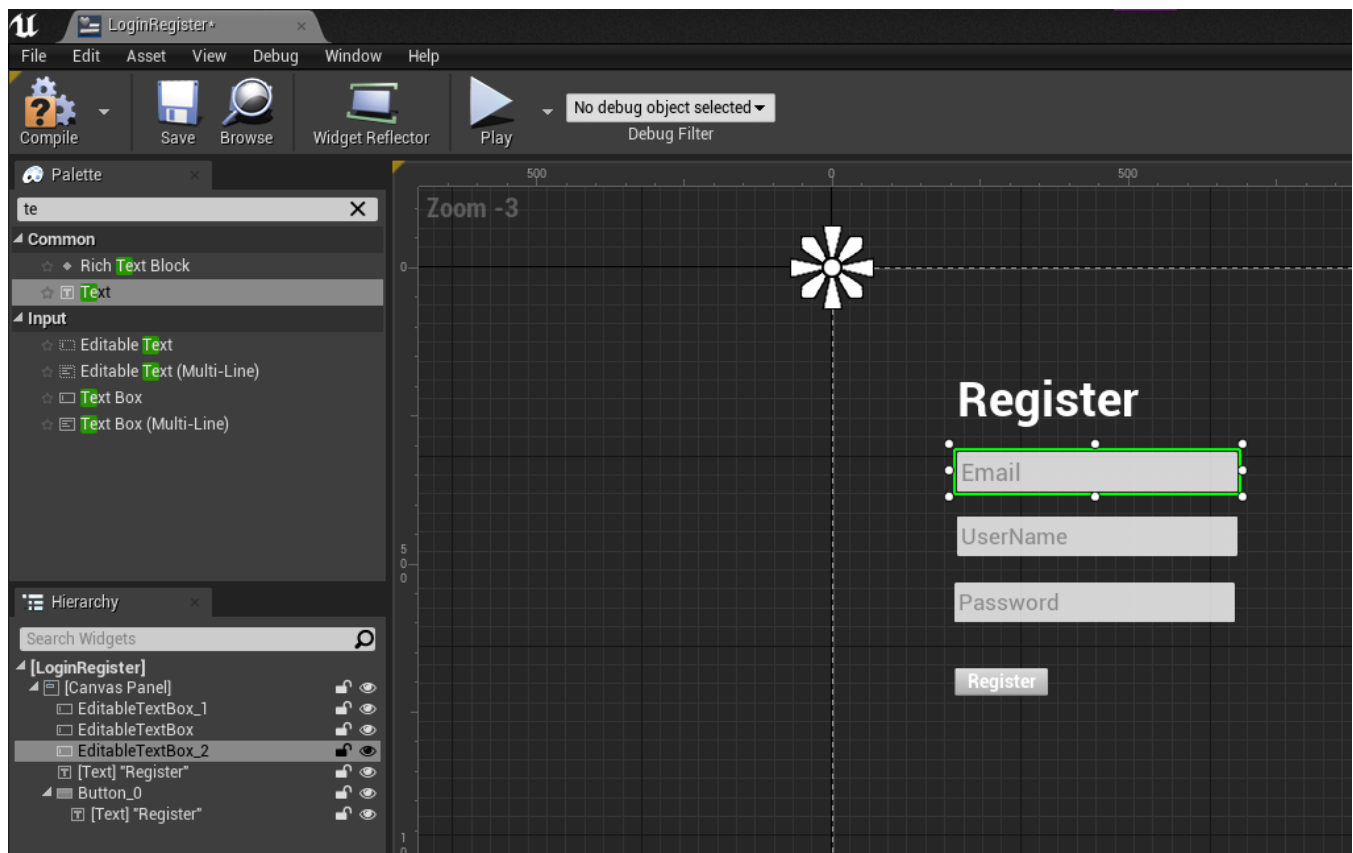
It should say “General, API Features, Secret Keys, Email Preferences “and so on and so forth. The magic item we need it Secret keys



Now Copy the key and paste it in unreal. Great now the easiest step is complete DON'T FORGET TO SAVE. I learnt this the hard way.

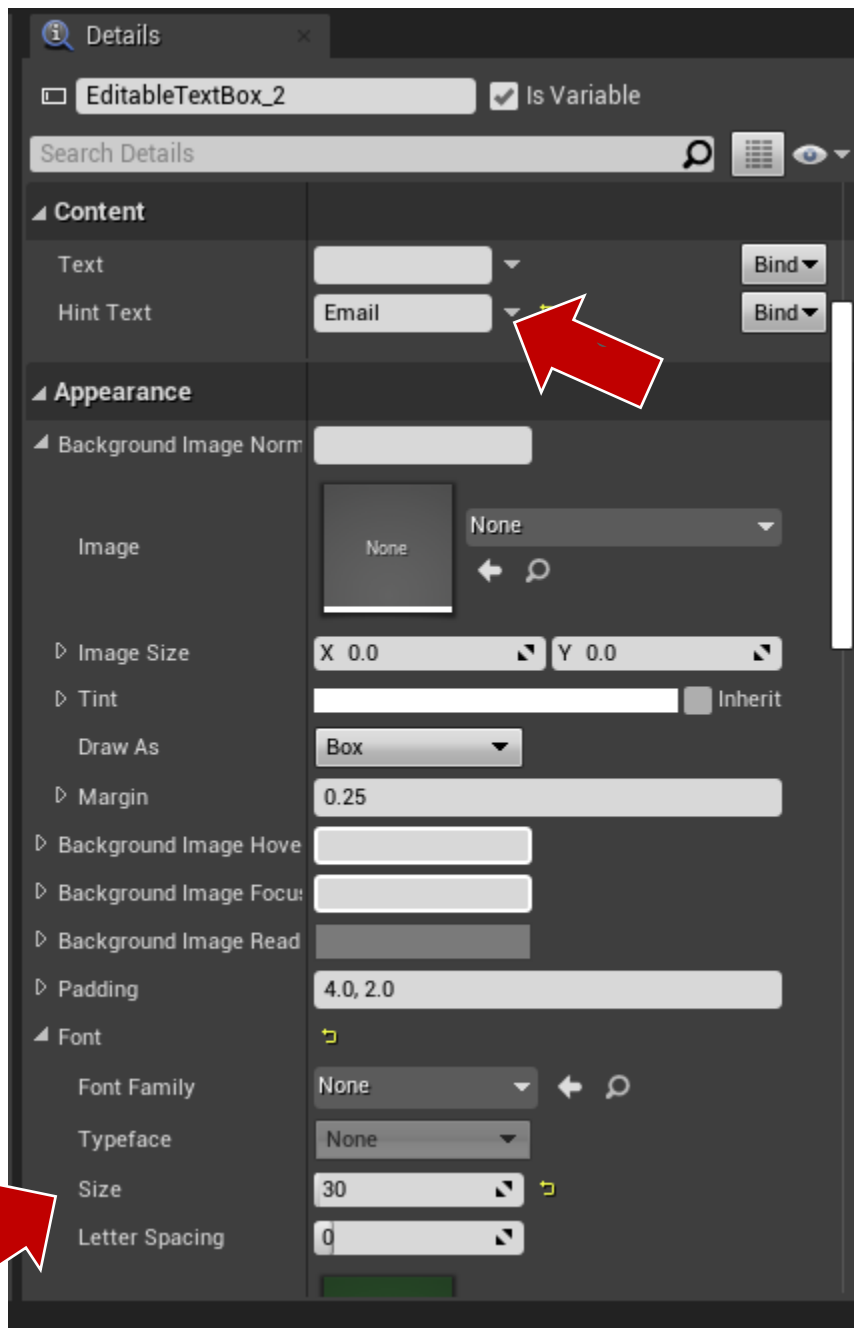
# 1. LOGIN UI

- The design and look of your login/register UI is completely up to you but a few key elements need to be the same. You can make the login section and the register section separately but for simplicity in this demonstration it will all be done in one widget. For the Register Ui Three “TextBoxes”. One for the user’s email, username and password. Finally, one button to accept the registration and to make it look better add some text, so the user knows that they are in the registration section. To make the text boxes say email, Username, Password. You need to select the textbox and change the hint text and scroll down until you see “font” and that will change the size of the hint text. Don’t forget to anchor your UI elements so they don’t move in game





## Part 2



Now do the same thing for the login but only include the email field and the password field it should look something like this.

**Register**

Email

Username

Password

Register

**Login**

Email

Password

Login

This section will first frame the business opportunity and should answer the question: what problem(s) is the company trying to solve? Use a case example to describe the customers' pain point and how it is solved today. If the business' service addresses something the market has yet to identify as a problem (for instance, a new mobile app or a new clothing line), then also describe how the business' solution reduces stress, saves money, or brings joy to the customer.

After framing the opportunity, describe the service in detail and how it is the solution the business offers, how it solves that problem, and what benefits customers will receive.

This section also describes in more detail how the services will be rendered and the pricing structure (e.g., fixed rate versus an hourly fee). Describe how the company plans to differentiate from its competitors. What is the target market and how can the customer capitalize on your unique offering?

Depending on the type of business, the following sections may or may not be necessary. Only include relevant sections and remove everything else.

- **Opportunity:** Describe the current market for the business' offered service. At a high level, what is the market and who are its participants; is it business customers or consumers; what is the specific geography, etc.? More details on the market will be provided in the next section of the plan. Next, describe the current state of available services and how the business will offer better. Also discuss any additional services the company plans to offer in the future.
- **Product overview:** Describe the service offerings of the business in as much detail as possible. If it is effective to include pictures, this would be a good place to place them.
- **Key participants:** Identify any strategic partners in the business, such as critical suppliers, distributors, referral partners, or any others. In some businesses, products are custom-made and any break in their supply will impact the business. There may be key contributors to the services offered, so it is important to identify them.

- **Pricing:** Provide pricing of the service, gross margin projects, and upgrade paths. Describe why the company's pricing will be attractive to the target market. Have a gauge on the competitor's pricing and explain how the business' service is unique to justify its pricing structure.
  - Note the difference between working hours and billable hours. All working hours are not billable. If the business has employees with differing skill levels (for example, in a law practice, there are associates, paralegals, lawyers, partners, etc.), indicate the various billing rates.
  - Communicate rates clearly to clients and customers. If there are potential additional fees which will be passed on to clients or customers, define and establish them up front.

# 2. MARKET ANALYSIS

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The Market Analysis provides the reader with an understanding of how well the business knows and understands its market and if it is big enough to support the business objectives. This section provides an overview of the industry that the business will participate in. As this section is narrowed down to the ideal customer based on the business strategy, the plan will define the target market. A detailed description and sizing of the target market will help the reader understand the market value the business is pursuing (the number of potential customers multiplied by the average revenue for the product or service).

In defining the target market, the plan will identify key elements such as geographic location, demographics, buyer characteristics, the target market's needs, and how market needs are currently being met. If there are any direct competitors, explain how the company's service compares to the competitors in terms of solving the consumers' problems.

This section may also include a Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis as necessary, to better assess the business' position against the competition.

Depending on the type of business, the following sections may or may not be necessary. Only include what is need and remove everything else.

- **Industry type:** Begin with the broader descriptions of the market opportunity. For instance, if the intended business is a travel agency, the industry type would be service industry. In this particular market, the global revenues are projected to exceed \$183 billion, but the local agency will have a much smaller market. Identify the potential clientele in the company's local geography that might fit into the target demographic group. This section will also identify any industry regulations and evaluate trends in market growth and stability.
- **Market segmentation:** This section defines the main market segments and those the business is targeting now. A market segment is a group of people (or other businesses) within the industry, identify smaller segments, such as luxury travel or exotic cruisers. The market can also be segmented by criteria such as quality, price, range of products, geography, demographics, and others. A few other elements to consider answer questions such as: Is the segment growing, shrinking, or will it be flat for the next few years? What percentage of the market will be reachable? What share of the market is anticipated within the next 2-3 years? Graphics are best used in a section like this to either show growth (line graph) or percentages of markets or groups (pie chart).
- **Competition:** All businesses compete in one way or another. It may be with specific, direct competitors or it may be with the way customers have been doing things for a long time.

When identifying the competition, identify who else is providing services to solve the same problem the business seeks to address. What are the business' advantages over these competitors? How will the company's voice be heard over the noise of competitors?

Sometimes a business plan includes a matrix of features and compares how each business offers or does not offer those features. This section reflects how the company's solution is different and better suited for the identified target market compared to the competition.

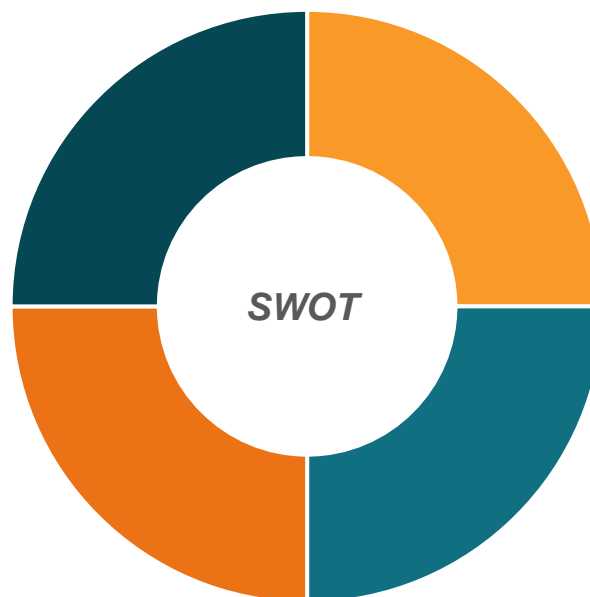
- **SWOT analysis:** A SWOT analysis may be included by completing the boxes below to assess the business' current environment's strengths and weaknesses (internal) and opportunities and threats (external). This is a good exercise to go through on an annual basis. After completing the analysis, provide thoughts on: how the business' strengths can help maximize opportunities and minimize threats; how its weaknesses can slow the company's ability to capitalize on the opportunities; and how the business' weaknesses could expose it to threats.

### STRENGTHS

- Advantage
- Capabilities
- Assets, people
- Experience
- Financial reserves
- Value proposition
- Price, value, quality

### OPPORTUNITIES

- Areas to improve
- New segments
- Industry trends
- New products
- New innovations
- Key partnership



### WEAKNESSES

- Disadvantages
- Gap in capabilities
- Cash Flow
- Suppliers
- Experience
- Areas to improve
- Causes of lose sales

### THREATS

- Economy movement
- Obstacles faced
- Competitor actions
- Political impacts
- Environmental effects
- Loss of key staff
- Market demand

### 3. OPERATING PLAN

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Additionally, it is necessary to outline how the company currently and will continue to develop and maintain a loyal customer base. This section includes management responsibilities with dates and budgets and making sure results can be tracked. What are the envisioned phases for future growth and the capabilities that need to be in place to realize growth?

The operating plan describes how the business works. Depending on the type of the business, important elements of this plan should include how the company will bring services to market and how it will support customers. It is the logistics, technology, and basic blocking and tackling of the business.

Depending on the type of business, the following sections may or may not be necessary. Only include what is needed and remove everything else. Remember: try to keep the business plan as short as possible. Excessive detail in this section could easily make the plan too long.

- **Order fulfillment:** Describe the company's procedures for delivering services to its customers. As a service company, determine how to keep track of the customer base, form of communications, and how best to manage sales and data.
- **Payment:** Describe the standard payment terms and the payment methods accepted. Describe the pricing plans (one-time service fees, hourly-based fees, markups, and any other fees) and any impact on cash flow.
- **Technology:** If technology is critical to the business, whether it is part of the service offering or is fundamental to delivering a service, describe the key technologies used that are proprietary. If the business data (company or customer) is at risk, describe the data security plan in place, as well as any backup or recovery in the case of a disaster or outage.
- **Key customers:** Identify any customers that are important to the success of the business due to a partnership, volume, or pathway to a new market. Also identify any customers who bring in more than 10% of the company's revenues.
- **Key employees and organization:** Describe unique skills or experiences that are required of the current team. If necessary, describe any proprietary recruiting or training processes in place. List key employees that are necessary for success. Include an organization chart to support this section.
- **Facilities:** Describe the type of business facility, whether leased, owned, or a shared business premises. Provide a listing of business locations, their purpose, and future plans

## Part 2

for these facilities. If there are no facilities, and the business plans to buy or lease them, include that in this plan.



# 4. MARKETING AND SALES PLAN

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Promoting the business, whether through generating leads or traffic to a website or store, is one of the most important functions of any business. In this section of the plan, provide details of intended marketing of the business. Describe the key messages and channels used for generating leads and promoting the business. This section should also describe any sales strategy. Depending on the type of business, the following sections may or may not be necessary. Only include what is needed and remove everything else.

- **Key messages:** Describe the key messages that will elevate services in the target customers' eyes. If there is sample collateral or graphical images of some messages, include them.
- **Marketing activities:** Which of the following promotion options provide the company the best chance of product recognition, qualified leads, store traffic, or appointments?
  - Media advertising (newspaper, magazine, television, radio)
  - Direct mail
  - Telephone solicitation
  - Seminars or business conferences
  - Joint advertising with other companies
  - Word of mouth or fixed signage
  - Digital marketing such as social media, email marketing, SEO, or blogging
  - Provide limited free consultations (such as free job pricing for Contractors, free landscaping consultation for landscapers, or free pricing opinions for real estate agents)
  - Sponsor local sports teams or other community events
  - Give free informational talks either at the business offices or for local businesses offering complementary services (such as a real estate agent providing seminars about preparing a home to bring to market)
  - Do free work for local non-profits (such as an ad agency designing a local farmer's market's website for free)
- **Sales strategy:** If needed, what will be the sales approach? Will there be full-time commissioned sales people, contract sales, or another approach? Many one-on-one

service businesses are heavily reliant on word of mouth. Take this into account when developing the sales strategy.

# 5. FINANCIAL PLAN

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Creating a financial plan is where all of the business planning comes together. Up to this point, the target market, target customers, and pricing have all been identified. These items, along with assumptions, will help estimate the company's sales forecast. The other side of the business will be what expenses are expected. This is important on an ongoing basis to see when the business is profitable. It is also important to know what expenses will need to be funded before customer sales, or the cash they generate, is received.

At a minimum, this section should include estimated start-up costs and projected profit and loss, along with a summary of the assumptions being made with these projections.

Assumptions should include initial and ongoing sales, along with the timing of these inflows.

- **Projected start-up costs:** The table below shows a sample of ongoing and one-time cost items that the business might need in order to open. Many businesses are paid on credit over time and do not have cash coming in immediately. It is necessary to make assumptions about how many months of recurring items, in addition to one-time expenses, to estimate when cash will begin to flow into the company. To begin with, the company will have to fund out of savings or an initial investment. There is a blank table in the Appendix to complete potential start-up cost projections.

## Services

### Business Plan

START-UP COSTS				
Your Office-Based Agency			January 1, 20xx	
COST ITEMS	MONTHS	COST/ MONTH	ONE-TIME COST	TOTAL COST
Advertising/Marketing	3	\$300	\$2,000	\$2,900
Employee Salaries*	4	\$500	\$2	\$2,002
Employee Payroll Taxes and Benefits	4	\$100	\$1,500	\$1,600
Rent/Lease Payments/Utilities	4	\$750	\$2,500	\$5,500
Postage/Shipping	1	\$25	\$25	\$50
Communication/Telephone	4	\$70	\$280	\$560
Computer Equipment		\$0	\$1,500	\$1,500
Computer Software		\$0	\$300	\$300
Insurance		\$0	\$60	\$60
Interest Expense		\$0	\$0	\$0
Bank Service Charges		\$0	\$0	\$0
Supplies		\$0	\$0	\$0
Travel & Entertainment		\$0	\$0	\$0
Equipment		\$0	\$2,500	\$2,500
Furniture & Fixtures		\$0	\$0	\$0
Leasehold Improvements		\$0	\$0	\$0
Security Deposit(s)		\$0	\$0	\$0
Business Licenses/Permits/Fees		\$0	\$5,000	\$5,000
Professional Services - Legal, Accounting		\$0	\$1,500	\$1,500
Consultant(s)		\$0	\$0	\$0
Inventory		\$0	\$0	\$0
Cash-On-Hand (Working Capital)		\$0	\$1,000	\$1,000
Miscellaneous		\$0	\$2,000	\$2,000
<b>ESTIMATED START-UP BUDGET</b>				<b>\$26,472</b>

\*Based on part-time employees. This may change once you hit your growth benchmark.

## Services

### Business Plan

**Projected profit and loss model:** The model below shows a sample of the projections a small business is forecasting for their first 12 months of operations. The top portion of the table shows projected sales and gross profit. This is a good place to begin creating the company's sales forecast. The next section itemizes the recurring expenses the business is projecting for the same months. These should be consistent with the estimated start-up costs completed in the prior section. At the bottom of this model, it will be possible to see when the company is becoming profitable and what expense items are the most impactful to its profitability. There is a blank table in the Appendix to complete the business' own start-up cost projections.

START-UP COSTS													
Your Office-Based Agency												January 1, 20xx	
REVENUE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
Estimated Sales	\$5,000	\$13,000	\$16,000	\$7,000	\$14,500	\$16,400	\$22,500	\$23,125	\$24,549	\$22,000	\$25,000	\$27,349	\$216,423
Less Sales Returns & Discounts	\$0	(\$350)	\$0	(\$206)	(\$234)	\$0	\$0	(\$280)	(\$1,200)	(\$1,600)	\$0	(\$2,400)	(\$6,270)
Service Revenue	\$0	\$0	\$0	\$0	\$0	\$250	\$350	\$100	\$0	\$0	\$1,245	\$1,360	\$3,305
Other Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,500	\$0	\$0	\$0	\$0	\$1,500
Net Sales	\$5,000	\$12,650	\$16,000	\$6,794	\$14,266	\$16,650	\$22,850	\$24,445	\$23,349	\$20,400	\$26,245	\$26,309	\$214,958
Cost of Goods Sold*	\$2,000	\$5,200	\$6,400	\$2,800	\$5,800	\$6,560	\$9,000	\$9,250	\$9,820	\$8,800	\$10,000	\$10,940	\$86,569
Gross Profit	\$3,000	\$7,450	\$9,600	\$3,994	\$8,466	\$10,090	\$13,850	\$15,195	\$13,529	\$11,600	\$16,245	\$15,369	\$128,389
EXPENSES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
Salaries & Wages	\$2,500	\$2,500	\$3,500	\$5,000	\$5,000	\$5,000	\$8,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$76,500
Marketing/Advertising	\$400	\$450	\$450	\$450	\$900	\$900	\$900	\$900	\$900	\$900	\$1,200	\$1,200	\$9,550
Sales Commissions	\$250	\$650	\$800	\$350	\$725	\$820	\$1,125	\$1,156	\$1,227	\$1,100	\$1,250	\$1,367	\$10,821
Rent	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$1,250	\$15,000
Utilities	\$250	\$150	\$200	\$200	\$200	\$250	\$250	\$250	\$200	\$200	\$250	\$250	\$2,650
Website Expenses	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$225	\$225	\$2,200
Internet/Phone	\$110	\$110	\$110	\$110	\$110	\$110	\$110	\$110	\$110	\$110	\$110	\$110	\$1,320
Insurance	\$165	\$165	\$165	\$165	\$165	\$165	\$165	\$165	\$165	\$165	\$165	\$165	\$1,980
Travel	\$100	\$0	\$0	\$250	\$0	\$0	\$0	\$0	\$675	\$800	\$0	\$0	\$1,825
Legal/Accounting	\$1,200	\$0	\$0	\$450	\$0	\$500	\$0	\$0	\$0	\$0	\$0	\$250	\$2,400
Office Supplies	\$125	\$125	\$125	\$125	\$125	\$125	\$125	\$125	\$125	\$125	\$125	\$125	\$1,500
Interest Expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Expenses	\$6,525	\$5,575	\$6,775	\$8,525	\$8,650	\$9,295	\$12,100	\$13,131	\$13,827	\$13,825	\$13,575	\$13,942	\$125,746
Income Before Taxes	(\$3,525)	\$1,875	\$2,825	(\$4,531)	(\$184)	\$795	\$1,750	\$2,064	(\$298)	(\$2,225)	\$2,670	\$1,427	\$2,643
Income Tax Expense	(\$529)	\$281	\$424	(\$680)	(\$28)	\$119	\$263	\$310	(\$45)	(\$334)	\$401	\$214	\$396
<b>NET INCOME</b>	<b>(\$2,996)</b>	<b>\$1,594</b>	<b>\$2,401</b>	<b>(\$3,851)</b>	<b>(\$156)</b>	<b>\$676</b>	<b>\$1,488</b>	<b>\$1,754</b>	<b>(\$253)</b>	<b>(\$1,891)</b>	<b>\$2,270</b>	<b>\$1,213</b>	<b>\$2,246</b>

\*In the service industry, Cost of Goods Sold is the monetized value of the time spent on the client.

# APPENDIX

START-UP COSTS				
Your Office-Based Agency			January 1, 20xx	
COST ITEMS	MONTHS	COST/ MONTH	ONE-TIME COST	TOTAL COST
Advertising/Marketing				
Employee Salaries				
Employee Payroll Taxes and Benefits				
Rent/Lease Payments/Utilities				
Postage/Shipping				
Communication/Telephone				
Computer Equipment				
Computer Software				
Insurance				
Interest Expense				
Bank Service Charges				
Supplies				
Travel & Entertainment				
Equipment				
Furniture & Fixtures				
Leasehold Improvements				
Security Deposit(s)				
Business Licenses/Permits/Fees				
Professional Services - Legal, Accounting				
Consultant(s)				
Inventory				
Cash-On-Hand (Working Capital)				
Miscellaneous				
ESTIMATED START-UP BUDGET				

## Instructions for Getting Started with Estimated Start-Up Costs

Determining a business' startup costs is critical to ensure enough cash is available to begin business operations within the budgeted time frame as well as within the cost budget. Startup costs typically fall within two categories: monthly costs and one-time costs. Monthly costs cover costs that occur each month during the startup period, and one-time costs are costs that will be incurred once during the startup period.

### Steps for preparation:

- **Step 1:** Enter the company name and the date this estimate is being prepared.
- **Step 2:** Enter the number of months and the monthly cost for each cost item that is recurring. For one-time costs only, skip the monthly costs. If there are cost items that have both recurring and one-time amounts, enter those as well. The total cost will calculate automatically in the far-right column.
- **Step 3:** Once all of the costs are entered, review the individual items and total amount to see where the budget can be fine-tuned or move something out into the future when more revenue is coming in.

## Services

### Business Plan

START-UP COSTS													
Your Office-Based Agency												January 1, 20xx	
REVENUE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
Estimated Product Sales													
Less Sales Returns & Discounts													
Service Revenue													
Other Revenue													
<b>Net Sales</b>													
<b>Cost of Goods Sold</b>													
<b>Gross Profit</b>													
EXPENSES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
Salaries & Wages													
Marketing/Advertising													
Sales Commissions													
Rent													
Utilities													
Website Expenses													
Internet/Phone													
Insurance													
Travel													
Legal/Accounting													
Office Supplies													
Interest Expense													
Other 1													
<b>Total Expenses</b>													
<b>Income Before Taxes</b>													
<b>Income Tax Expense</b>													
<b>NET INCOME</b>													

\* In the service industry, Cost of Goods Sold is the monetized value of the time spent on the client.



## Instructions for Getting Started on Profit & Loss Projections

Completing projections for Profit and Loss of a new company is a good exercise to understand and communicate when the company will begin to break even and see how sales and profits will grow. The top portion of the model to the left, Revenue, is a good way to forecast sales, month by month for the first year. The lower portion then applies estimated expenses for the same period of time to derive the business' profitability.

### Steps for preparation:

- **Step 1:** Enter the company name and the date this projection is being prepared.
- **Step 2:** For each month, beginning in January or whenever the start is estimated, enter the expected sales to be. This could be for a single service or multiple services. Add lines to this model for additional offerings. From this, subtract any product returns or discounts that are to be tracked (these should be shown as negative numbers, for example, -10). Below Net Sales, enter the Cost of Goods Sold. This refers to the monetized value of the time spent on a particular client.
- **Step 3:** For each month, enter the estimated salaries, marketing, utilities, and other items that are projected.
- **Step 4:** Once all of the costs have been entered, review the individual items and total amount to see where projections can be fine-tuned or move something out into the future when more revenue is coming in. The objective is to get to profitability and positive cash flow as quickly as possible.