LONGLEAT SAFARI PARK

INVITATION TO TENDER

'Roar'



October 2022

INSTRUCTIONS

You are required to complete ALL sections of this Invitation to Tender by

Friday 4th August 2023

You should take note of the indicative word counts stated in each section, and may not exceed these by more than 10%

It is recommended that you include images, tables, charts and diagrams within your tender document, none of which is included in the word count

SECTION 1: Product Specification and Features (600 words max)

1.1 Complete the table below to show how you intend to implement each of the Key Features as stated within the Product Specification.

Var. Fasture	PRICEIV describe howevilless involuntation for the 2	Table Caffeering
Key Feature	BRIEFLY describe how will you implement the feature?	Tools, Software and Resources
	Feel free to include mock-ups and sketches here to show your ideas visually	needed
Interactive	The interactive maps' design and map elements would be created by	
Landscape	the 2D/3D Artist and GUI Designer using the apps provided by the	
	Adobe Cloud service as well as have sounds created by the Sound	
	Designer. Subsequently, the design would be implemented by Junior	
	Developer 1. Finally, it will be checked by independent Senior QA 1 to	
	ensure proper functionality.	
3D Models	The four models and animation would be created by the 3D Artist and	N/A
	Modeler. To maintain uniformity between the models, he will be	IVI
	creating all of them.	AYA
Videos	The Managing Director will meet with a Teacher and the Videography	н_н
	Company to decide on the script. Subsequently, the Videography	
	Company will have a day on-location to shoot the videos. In case the	
	weather doesn't allow it, the shoot could be postponed as there is a	
	5-day contingency period between the shoot and implementation.	
	The in-app page layout and video player will be created by the lead	
	developer and then integrated by Junior Developer 1. Following that, both Junior Developers will convert it to mobile. Lastly, the videos will	
	be checked by Senior QA3.	
Learning Activities	While looking at the lion models and animations, there will be facts	
•	and trivia available for the children. Additionally, there will be an	
	option to revive in the Cat Trap game, where you can learn more	
	about the cats. The content for the trivia will be decided on by the	
	Managing Director and Teacher, and it will be implemented by the	
	Lead Developer.	
	Score: 135 Q: Where do tigers live?	
	1 Forest 3 Desert	
	Savana 4 Ocean	
	Hint: Rember to use the background if it could help you.	
	Trivia: Tiger like to ambush their prey. They are the only big cats that will chase even in	
	water on regulir bases.	
20.0		
2D Game – Cat	The game will be developed by the Lead Developer, Junior Developers	
Trap	1 and 2, 2D/3D Artist and GUI Designer, and the 3D Artist and Modeler. It will follow a concept similar to games like Subway Surfer,	
	where the user must avoid obstacles while chasing a cat through	
	procedurally generated worlds. This type of game offers high	
	replayability, which will keep children coming back to the app to play	
	it again. The game will feature three levels: African Savanna, Rain	•
	Forest, and City Atmosphere. In the Rain Forest mode, tigers will be	

found along with their facts; in the African Savanna map, lions will have their facts, and players can choose either lions or cheetahs per game; lastly, in the city level, facts for all creatures will be available. The facts implementation was discussed in the panel above. QA by Senior QA 3&1





1.2 What TWO additional, innovative features do you propose to include in 'Roar' in order to establish a Unique Selling Point (USP)?

Additional Feature	BRIEF Explanation and Justification of the Additional Feature and how it establishes a USP to the product	Tools, Software and Resources needed	Estimated Time Needed and Cost to implement
Augmented Reality	It would be a button on the main page that opens your camera and lets you take photos with the models adding to the excitement children are having and it would help them remember the park and what they learned there for longer. Implemented by the Lead Developer, with QA testing by Senior QA 2. USP: It very uncommon for apps to add such a feature.		Implementation- 3 days. Testing- 1 day. Cost: 693.23 Pounds

Lion Mascot. It would be nice for the children to have someone teach them the information, a face to associate with the new knowledge. The design will be created by the 2D/3D Artist, and the voice lines will be recorded by an independent voice actor which were written by a Script writer under teachers' supervision. The implementation will be handled by the Lead Designer and Junior Designer 1, with QA testing conducted by Senior QA 3. Unique Selling Proposition (USP): This interactive approach makes learning about the cat family more exciting for children and can be especially helpful for kids with behaviour/attention deficit problems.



Mascot Lines-2 days. Audio- 1 days. Implementation-5 days. Testing- 2 days. Cost: 2,340.84 **Pounds**

UI - 1 day.

1.3 Create a Comparison table to summarise your research of between 4 and 6 similar products within the mobile app market.

Company	Арр		
WWF	WWF together		
Zed Worldwide	Animal Planet: Trivia Challange		
World Book, Inc.	World Book's World of Animals		
Tivola Games GmbH	Pet World – My Animal Shelter		
National Audubon Society	Audobon Bird Guide		

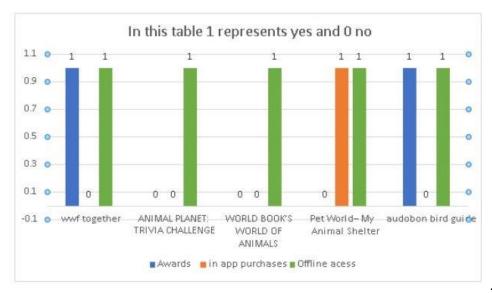
Features
Habitats, AR and Games.
Quizes Pictures and Videos.
Rank, Quizes , Videos and a large database of animals.
More concentration on gameplay and animal facts.
Absurd amount of information sounds images and maps for countless birds worldwide.

<u>Briefly summarise your research into the commercial scale and potential user base of the educational app market</u>

As evident from the data depicted in the charts, educational apps are commonly priced at 0\$, and users tend to strongly dislike in-app purchases. For optimal app recognition, the content should primarily focus on abundant information or be affiliated with prominent animal organizations. High ratings indicate that games with entertaining elements and player satisfaction are well-received. However, users show a preference for genuine game-oriented apps rather than those that merely mimic the gaming experience







SECTION 2: Product Development Plan (MS project) (800 words max)

2.1 Briefly explain the resources that you would need to complete the development of 'Roar'.

You should include information about Employed Staff, Freelance Contractors, Overheads, Specific Equipment and Travel/Accommodation within your Resource Definition.

Insert a screenshot of the Resource Sheet from your project plan here

2.2 Create a detailed Product Development Plan using Microsoft Project that shows low-level task information relating to the creation of all aspects of the 'Roar'.

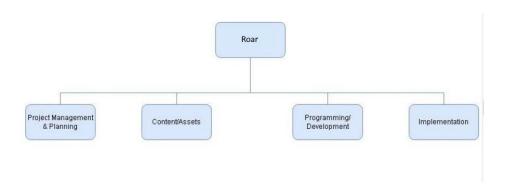
You will need to include the following information within the Product Development Plan:

- Task and Sub-Task Definition, linked to Project Phases/Themes
- Resource Allocations assigned to each task
- Estimate of Duration for each task based on allocated resource(s)
- Project Schedule
- Project Milestones
- Gantt Chart for the entire project showing tasks, duration, milestones and resources

In order to communicate the thinking and approach that you have undertaken when creating the Product Development Plan, answer each of the following questions, and where appropriate, **include screenshots of the relevant elements of MS Project or other planning documents**.

2.2.1 Project Structure – Themes and Phases

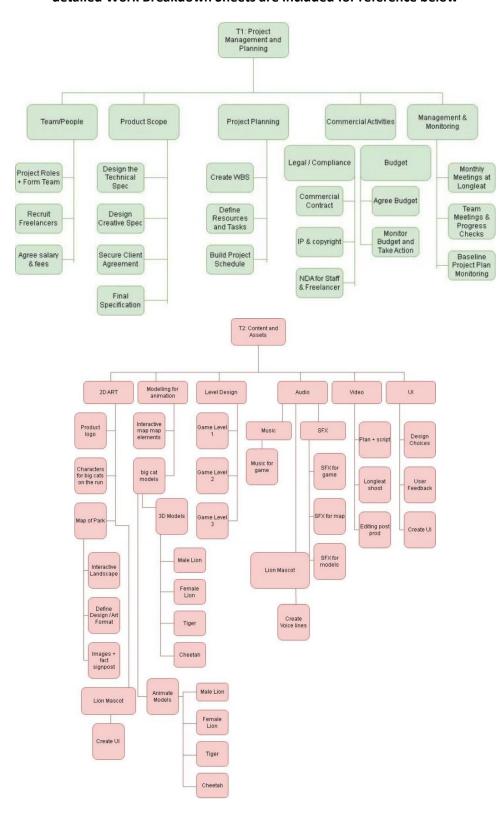
The 'Roar' app development is structured into four areas: project management & planning, content/assets, programming/development, and implementation.

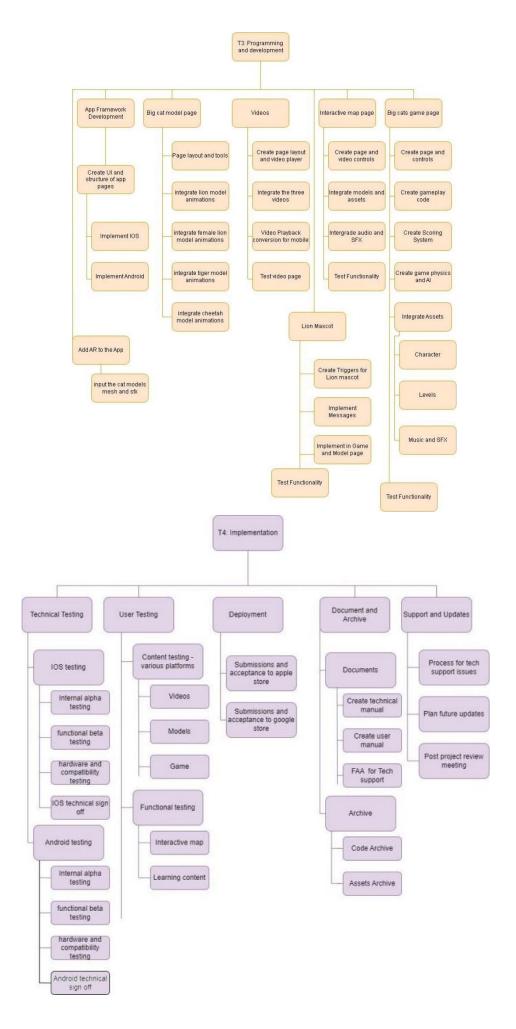


2.2.2 Task and Sub-Task Definition – Work Breakdown Structures

I created a comprehensive Work Breakdown Structure (WBS) for the 'Roar' app project by systematically breaking down the project's objectives into smaller, manageable tasks and sub-tasks. Starting from the top-level themes and phases, I further divided each phase into specific activities required to achieve the project goals. Within the 'Project Management and Planning' phase, I subdivided tasks into areas such as team formation, product scope, project planning, commercial activities, and management/monitoring. Each of these areas contained multiple sub-tasks that outlined the detailed steps and actions needed for successful execution and the same structured approach was applied to the 'Content and Assets' and

'Programming and Development' phases, ensuring a comprehensive breakdown of activities related to creating assets, designing user interfaces, developing the app framework, integrating animations, implementing interactive elements, and more. The 'Implementation' phase outlined the steps for technical and user testing, deployment, documentation, and ongoing support, ensuring a smooth transition from development to the launch and maintenance stages. I used summary tasks to group related sub-tasks under higher-level categories, enhancing the clarity and organization of the WBS. The detailed Work Breakdown Sheets are included for reference below





Roar – Invitation to Tender Template Page 8

2.2.3 Task Duration and Resource Allocation

Leveraging my hands-on experience in both coding and modelling, I pieced together well-informed timeframes for each role. I did this by comparing my timing to the benchmarks set by professionals working on lessons online. My understanding of UI/UX design gave me the ability to assess the time frame constraints involved in forming visual aspects, a talent I developed throughout my time studying multimedia in Bulgaria and my skills in video and audio editing, combined with valuable interactions with industry peers in Bulgaria, allowed me to carefully develop precise estimates for these creative endeavours. My father, an esteemed and seasoned actor in Bulgaria with over four decades of stage wisdom, became my guiding beacon for enhancing the project's acting dimension. Not to mention, my own venture into voiceovers which added layers of understanding, both as the actor and recorder/editor, enriching the project's artistic tapestry. For quality assurance, I began by assessing the average time it takes to handle a simple function. From there, I applied a practical scaling approach, taking into account the complexity of each specific function. In essence, combining my research, diverse experiences, and the knowledge I've gained allowed me to make good assumptions.

2.2.4 Building the Project Schedule

I utilized auto-scheduling for my breakdown structure, starting with precision to enable multiple people to work on parallel tasks and achieve synchronized completion, thus optimizing time. However, I manually set the recurring tasks.

Though there were occasional hiccups, most issues arose from forgetting to add a function and then adjusting the predecessors. Overall, the well-structured work breakdown structure saved me a lot of time.

For specific events, such as the Managing Directors' Monthly visit on the first working Wednesday, the working days of the accountant, and staff meetings on Mondays, I made use of recurring tasks. This allowed me to leverage different options as needed.

149 €	49 🗨 급 1.5		■ Longleat Visit	104 days	Wed 06/09/23	Fri 02/02/24	£1,330.73		
150 🖺	1.6.1	*	Longleat Visit 1	1 day	Wed 06/09/23	Wed 06/09/23	£266.15	Travel, Managing Direc	Trav,MD
151 🖺	1.6.2	*	Longleat Visit 2	1 day	Wed 04/10/23	Wed 04/10/23	£266.15	Travel, Managing Direc	Trav,MD
152 🖺	1.6.3	*	Longleat Visit 3	1 day	Wed 01/11/23	Wed 01/11/23	£266.15	Travel, Managing Direc	Trav,MD
153 🖺	1.6.4	*	Longleat Visit 4	1 day	Wed 06/12/23	Wed 06/12/23	£266.15	Travel, Managing Direc	Trav,MD
154 🖺	1.6.5	*	Longleat Visit 5	1 day	Wed 03/01/24	Wed 03/01/24	£266.15	Travel, Managing Direc	Trav,MD

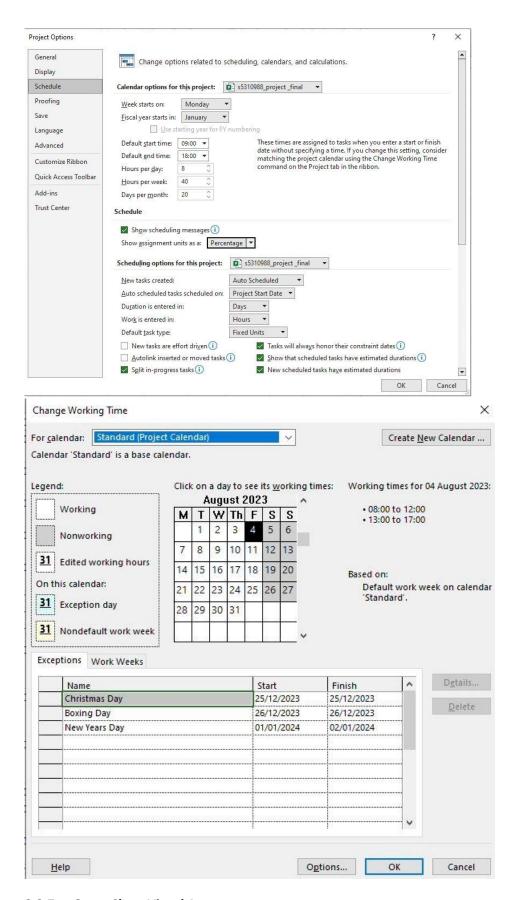
As mentioned earlier, with the simultaneous work on different parts of the project, everything fell into place. I did have to review the predecessors a few times, but eventually, I even managed to achieve a contingency time of a little over 10%.

2.2.5 Setting Milestones

I've set up three different milestones, which will also serve as payment times. The initial milestone will be at the start, the second one upon the creation of the assets, and finally, a third one at the end. The payment distribution will be as follows: 30% of the overall cost covered at the start, followed by 50% for the asset creation milestone. By that point, the only substantial work remaining would be the implementation of the game, as the anticipated end of asset creation is on the 24th of November, and for programming and development, it's the 30th.

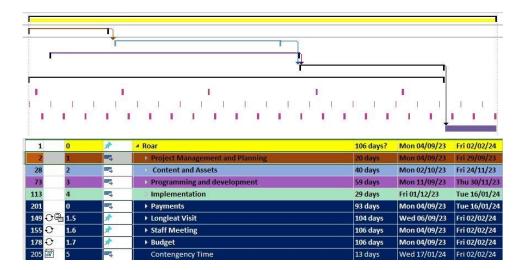
2.2.6 Global Project Parameters within MS Project	ect 2019
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I mainly used the scheduling feature for Bank holidays, as for the project itself I've changed a few things setting the scheduling options to automatic and made the working hours start from 9:00 just for quality of life



2.2.7 Gantt Chart Visual Appearance

For the Gantt chart I just used the change background function for the project timeline I used both Bar Styles and Format Bar.



SECTION 3: Financial and Commercial Data (600 words max)

3.1 Calculate and explain the TOTAL COST that you propose to charge to undertake the development of 'Roar'.

You should complete the Tender Spreadsheet Template to calculate the total cost of your proposal, and then include screenshots of the relevant sections of the spreadsheet when answering the questions below.

3.1.1 Total Cost

What is the TOTAL COST of your tender proposal?

				Tender Document
			Amount	Reference
1	Employed Staff Costs		£34,678.18	3.1.2
2	Freelance Contractor Costs	£8,951.60	3.1.2	
3	Business Infrastructure Overhead Costs		£26,693.89	3.1.3
4	Business IT Overhead Costs		£3,141.63	3.1.3
5	Project Specific Direct Costs		£450.00	3.1.4
6	Travel, Accommodation and Subsistence Cost	s	£236.50	3.1.5
	Total Project Costs		£74,151.79	
	Contingency (insert %)	15.0%	£11,122.77	3.1.6
	Profit (insert %)	10.0%	£7,415.18	3.1.7
	Total Exc VAT		£92,689.74	
	VAT Rate	20.0%	£18,537.95	
	TOTAL Project Cost inc VAT		£111,227.69	3.1.1

3.1.2 Staffing Costs – employed and freelance resources

From the Resource usage data, I discovered how much each employee had worked the way their salary was calculated from the brief + 13.8% employer NI.

Each Freelancer Salary was calculated by checking sites like indeed or glass door to see tha average for a certain position and seniority most of the important freelancers are of higher Quality to ensure that the app will be amazing.

3.1.3 Operational Overhead Costs

One by one in the Overhead cost section:

 Premisees Rent: :https://www.primelocation.com/torent/commercial/details/64703476/?search_identifier=896f3bf2e139a7fc5a37b0775d68e6b4

It's a average deducted from the size of other offices in the same area.

Business rates

I found 2 business offices in proximity with a rateable value of 114 and 125 per sq./m so with a mean of 120 rateable value per sqm 1000sqft is 92.903sq/m which makes the witch gives me a rateable value of 11,148.36 it's a small business as it has 1 place of operation and its >15k rateable value and since the SBRR starts at 100% from 12k it means the business doesn't pay any business rates.

			Assumed based on
			:https://www.primelocation.com/to-
			rent/commercial/details/64703476/?searc
			h_identifier=896f3bf2e139a7fc5a37b0775
Premises Rent	£10,920.00	£910.00	d68e6b4
Business Rates	£0.00	£0.00	Small buissness under 12k rateable
			15-30k kWh for a small buissnes well use
			20K kWh as were on the lower end. 20 K
			kWh x
			16.67https://www.businessenergy.com/bu
			siness-gas/
			https://www.utilitybidder.co.uk/compare-
			business-energy/what-is-average-business-
			energy-consumption/ Price:
			https://www.google.co.uk/url?sa=t&rct=j&
			q=&esrc=s&source=web&cd=&cad=rja&ua
			ct=8&ved=2ahUKEwiW5eCW572AAxWNXE
			EAHZ3rDbIQFnoECD0QAQ&url=https%3A%
			2F%2Fwww.switch-
			plan.co.uk%2Fsuppliers%2Fbritish-
			gas%2Fdorset%2Fpoole%2F&usg=AOvVaw
Utilities - Gas	£3,741.90	£311.83	3LC-clmGS1LWrLRGAfWTYj&opi=89978449
			22.5 kWh per year/sft. Helpful Octopus
			24M-24 months fixed-15.03 p/ 22.5
			kWh/sqft * 1000 sqft = 22,500 kWh/22,500
			kWh * 0.1503 GBP/kWh = 3381.75 GBP
Utilities - Electric	£3,381.75	£281.81	https://bionic.co.uk/business-

			an augustaviidas (avanaga an angus vaaga fan
			energy/guides/average-energy-usage-for- businesses/
			South Staffs Water calculated an avarage
			of 50 L per day per employ .260 working
			days x7 + 260/5 (accountant) at 4.09 per
			cubic meter (Water supply/Sewerage
			charges) https://www.south-staffs-
			water.co.uk/media/1509/waterusebusines
			s.pdf
I Itilitica Matan	C202 02	C21 00	https://www.wessexwater.co.uk/bills-and-
Utilities - Water	£382.82	£31.90	accounts/our-charges
			BSRIA estimates £23.17 per m2/ 92.09 *
Premises Maintenance	£2,133.00	£177.75	23.17
			200
			https://www.nimblefins.co.uk/business-
			insurance/commercial-property-
			insurance/average-cost-commercial-
Premises Insurance	£2,400.00	£200.00	<u>building-insurance-uk</u>
			40 pounds avg per week x 48 working
			weeks
			https://thesupercleaners.co.uk/how-
Premises Cleaning	£1,920.00	£160.00	much-to-charge-for-office-cleaning/
			Virgin-Standard analogue line-£17.50 per
Telecom - Landline	£200.00	£16.67	month
			Vodaphone Unlimited 25 per month exc
			Vat so 31x8 248 per monthVoIP instead of
Telecom - Mobile	£1,984.00	£165.33	work phones
			25.60 Vodaphone Fiber per month (307.2)+
Internet and Broadband	£716.16	£59.68	back up Virgin £34.08 per month (408.96)
			Idrive 300 poundsfor 2 years 10TB storage
Data Cloud Storage	£300.00	£25.00	x 2 for 20TB
			250 per month
			https://www.expertmarket.com/uk/accou
			nting-services/how-much-accountant-
			cost#:~:text=Starting%20out%20with%20t
			he%20basics,the%20size%20of%20your%2
			<u>Obusiness</u> .
			https://www.google.co.uk/url?sa=t&rct=j&
			q=&esrc=s&source=web&cd=&cad=rja&ua
			ct=8&ved=2ahUKEwj2rcrF8r2AAxVhUUEAH
			ZU3D1EQFnoECBsQAw&url=https%3A%2F
			%2Fwww.savvysme.com.au%2Fquestion%
			2F2514-how-much-does-it-cost-to-hire-an-
Professional Services - Accountancy	£3,000.00	£250.00	accountant-for-a-small-
= = = = = = = = = = = = = = = = = = =	-,-,-,-		

		1	
			business%23%3A~%3Atext%3DWith%2520
			all%2520monthly%2520costs%2520consid
			ered%2C%25241%252C000%2520and%25
			20%25245%252C000%2520per%2520year.
			&usg=AOvVaw1f-
			AVXftILW x6jVMyTvTg&opi=89978449
			800
			https://www.contractscounsel.com/b/prof
Professional Services - Legal	£800.00	£66.67	essional-services-agreement-cost
			120 +140 x 8 avg insurance per year for
			employers' liability insurance
			https://www.nimblefins.co.uk/business-
			insurance/average-cost-business-
Insurance - Employer/PL/Contents	£1,240.00	£103.33	insurance-uk
			9,3% of revenue assuming they have have
			4 projects with a gross income of 125k
Marketing and Promotion	£46,500.00	£3 875 00	each (9.3 avg for uk businesses)
Ividi Keting and Fromotion	140,300.00	13,073.00	cuen (5.5 avg for ak basinesses)
			77 02 nor norson nor month
			77-92 per person per month
			(85)https://www.allcopyproducts.com/blo
			g/office-supply-
			budget#:~:text=A%20company%20with%2
Continue of Contin	60.460.00	6600.00	01%2D4,year%20%E2%80%94%20or%20%
Stationery and Consumables	£8,160.00	£680.00	2489.08%20per%20month.
			pizza events twice a month with soft drink
			(4 pizzas 4 2l drinks) pizzas are 40-60 drinks
Catering and Refreshments	£1,200.00	£100.00	are 10. 100 pounds per month

3.1.4 Specific Resources and Equipment for this project

3.1.5 Project Management Costs – travel, accommodation, meetings

The manager could save an hour and 20 minutes by driving. Statistically speaking he has a car as hes a business owner which in the Uk would put him in the 35-40 range. People of those ages have a over 75% to own a car so calculating the miles times the gov allowed travel of 0.44p per mile under 10k miles is 42.30. He doesn't need accommodation, but he does need a 5 pounds stipend for food as he's over 5 hr he doesn't stay after 20:00 so it doesn't go up to 10.

3.1.6 Contingency Costs

The allocation of a 15% contingency cost for the 'Roar' app project is a strategic measure to proactively address potential risks and uncertainties. Looking at app development in general I have identified various factors that could impact the project's progress, such as technical complexities, scope changes,

and unexpected delays. The contingency amount serves as a financial safety net if the company needs more time or in case software fails and other unforeseen events. The contingency amount is in roughly 1.5:1 to contingency ensuring that there is room for financial inaccuracy even if the project takes longer than expected.

3.1.7 Profit Margin

The profit margin of 10% is justified as it represents a fair return on investment for the risk taken in undertaking the 'Roar' app project. This margin ensures that the company is making the project financially viable and supporting future business growth. Additionally, it allows for potential fluctuations in expenses and other business costs, ensuring the company remains stable.

3.2 Create a Payment Plan linked to Milestones within the Product Development Plan, that shows what percentage of the total Project Cost (3.1.1) you would expect to receive, and at which specific points within the Product Development Plan these payments would be made.

You should present this information by completing the table below:

Payment No	Payment Date	Work Completed to trigger Payment	Amount Payable (£) (Exc. VAT)	Percentage of Total Project Cost	Running Total (£)
1	04.09.2023	Start of App	18,537.94	20%	22,245.53
2	24.11.2023	Asset Creation complete (Almost complete Development)	46,344.87	50%	55,613.84
3	16.01.2023	End of App	27,806.92	30%	33,368.30
4					
5					
6					
7					
8					
		TOTALS	92,689.74	100%	111.227.69

3.3 Explain how you envisage the Copyright and Intellectual Property Rights associated with the development of 'Roar' operating on a commercial level between Longleat and your company.

As the client and project sponsor, Longleat will have full ownership of the app's IP. Digital Learning

Systems will ensure all contractual agreements clearly state the transfer of ownership to Longleat upon completion.